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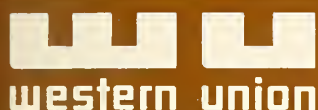
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ARIZONA MEDICINE



Telegram

June 13, 1974

Dear Doctor Payne:

It is always a pleasure to be the official bearer of good tidings. It is my cheerful privilege to inform you that the Arizona Medical Association, Inc. has once again achieved the distinction of exceeding its previous year's AMA dues paying membership. I am sure that this notification does not surprise either you or your staff since Arizona is one of only four states in the Union which has reached this pinnacle the last 11 consecutive years. Congratulations to you, other Arizona Medical Association officers and trustees and your fine staff for exhibiting the leadership that is perpetuating a unified profession in Arizona.

Cordially,
Russell B. Roth, M.D., President
American Medical Association

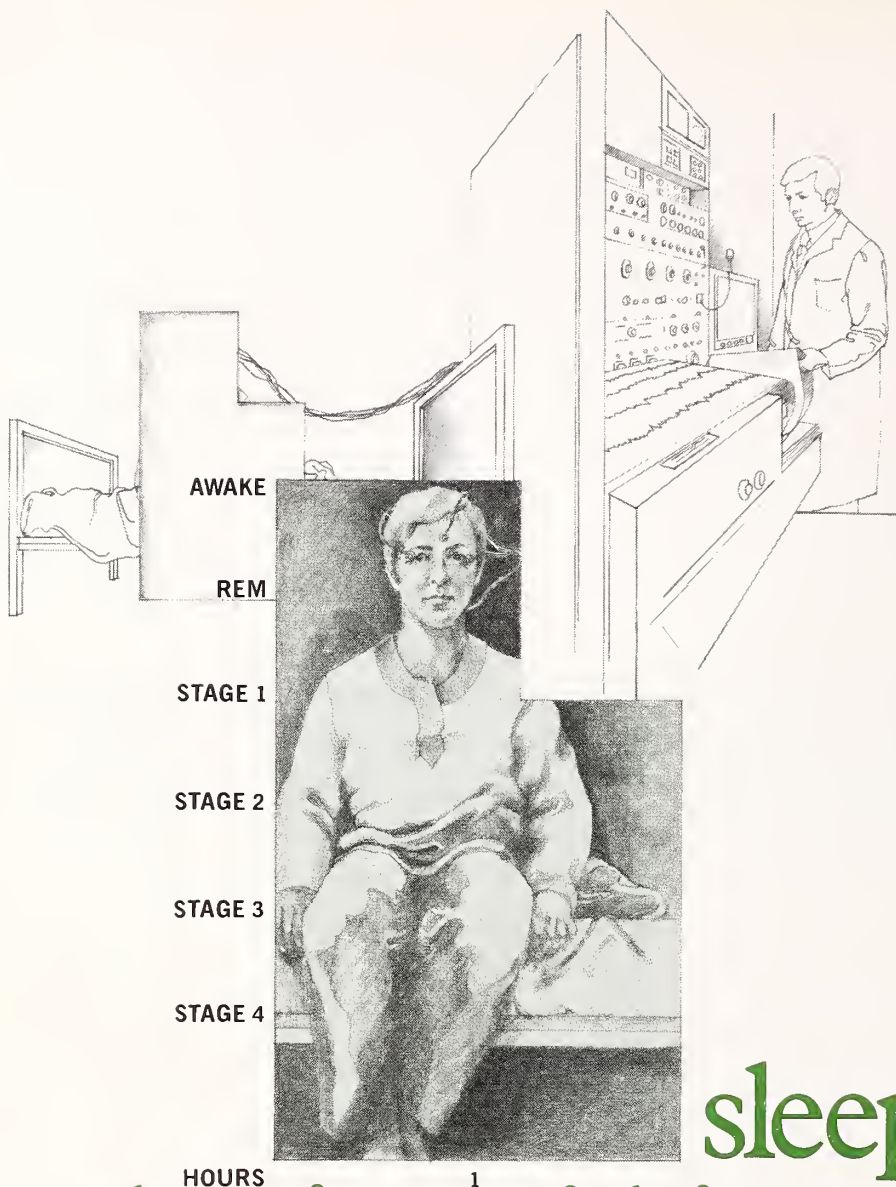
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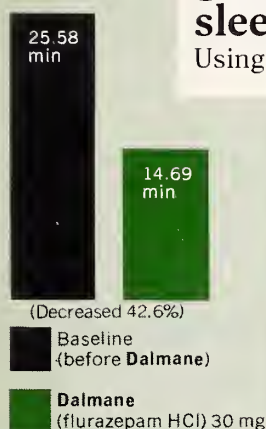


sleep
begins within
17 minutes, on average ...
an initial benefit of

Dalmane[®]
(flurazepam HCl) proved by a
**22-night clinical study of insomnia patients
in the sleep research laboratory and at home¹**

Three insomnia patients selected for difficulty falling asleep were administered Dalmane (flurazepam HCl) 30 mg for 14 consecutive nights. Placebo was given for four nights prior to and four nights after Dalmane. Physiologic tracings on Dalmane nights 1-3 showed sleep induction time averaged 13.90 minutes; on Dalmane nights 12-14, 18.80 minutes. Combined average for the 6 monitored drug nights was 16.35 minutes.¹

Average Time Required
to Fall Asleep (4 Studies,
16 Subjects²⁻⁵)



confirmed by clinical studies in four geographically separated sleep research laboratories²⁻⁵

Using a 14-night protocol involving eight insomniac and eight normal subjects, four studies confirmed the sleep-inducing effectiveness of Dalmane (flurazepam HCl) and the reproducibility of this response. On average, one 30-mg capsule induced sleep within 17 minutes. In all these studies, Dalmane induced sleep rapidly, reduced nighttime awakenings, and provided 7 to 8 hours of sleep without repeating dosage.²⁻⁵

Dalmane (flurazepam HCl) induces and maintains sleep, with relative safety

Dalmane is generally well tolerated; morning "hang-over" has been relatively infrequent. While dizziness, drowsiness, lightheadedness and the like have been noted most often, particularly in the elderly and debilitated, physicians should be aware of the possibility of more serious reactions, as noted below.

Before prescribing Dalmane (flurazepam HCl), please consult Complete Product Information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdose, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, e.g., excitement, stimulation and hyperactivity, have also been reported in rare instances.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.

Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.

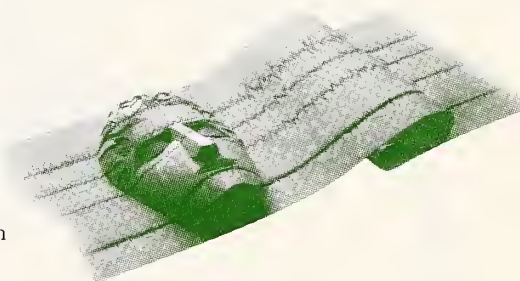
REFERENCES: 1. Kales A, et al: *Arch Gen Psychiatry* 23:226-232, Sep 1970

2. Karacan I, Williams RL, Smith JR: The sleep laboratory in the investigation of sleep and sleep disturbances. Scientific exhibit at the 124th annual meeting of the American Psychiatric Association, Washington DC, May 3-7, 1971

3. Frost JD Jr: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ

4. Vogel GW: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ

5. Dement WC: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ



when restful sleep is indicated **Dalmane**[®] (flurazepam HCl)

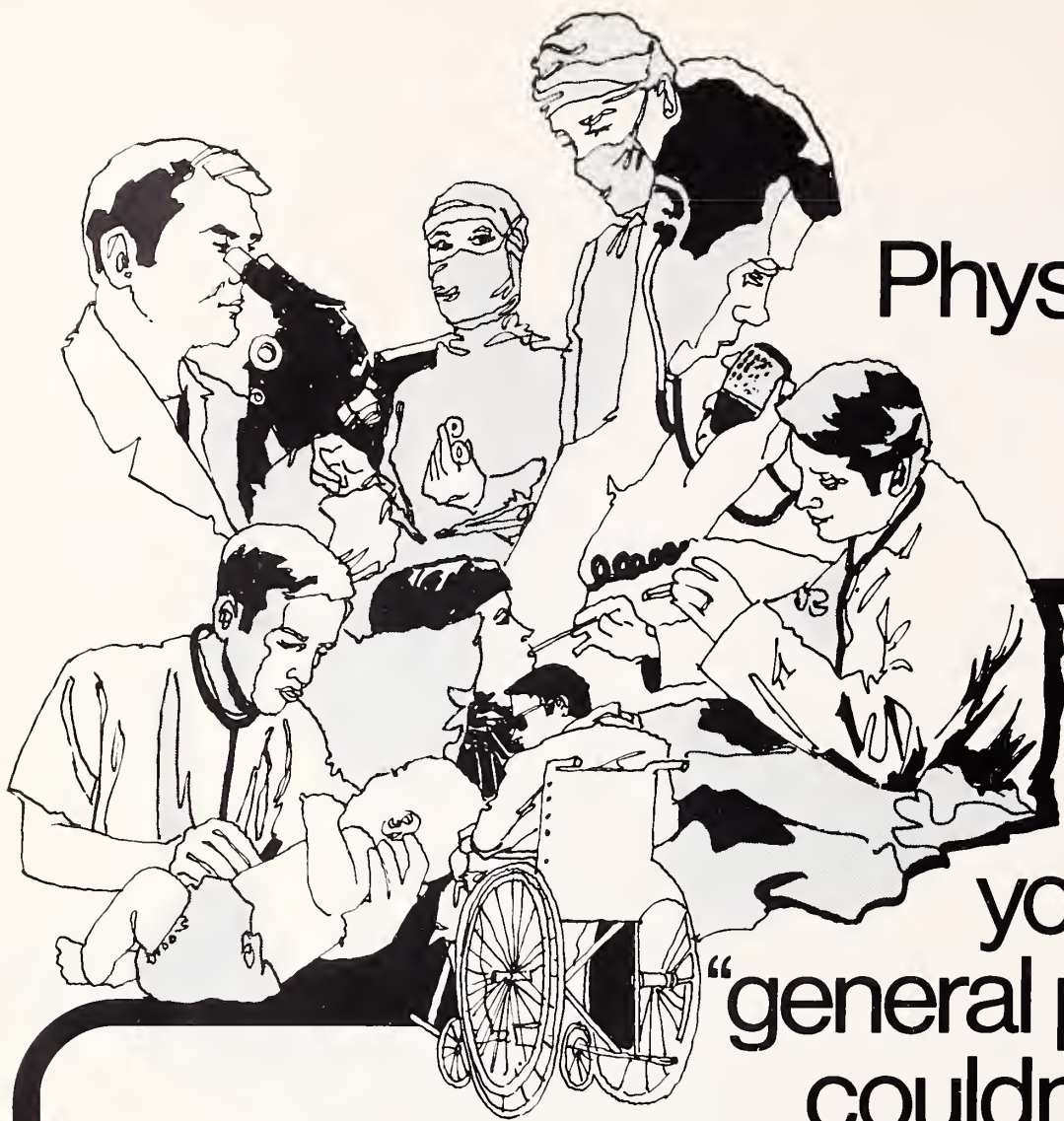
One 30-mg capsule h.s. — usual adult dosage
(15 mg may suffice in some patients).

**One 15-mg capsule h.s. — initial dosage for
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- reduces nighttime awakenings
- sustains sleep 7 to 8 hours, on average, without repeating dosage



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July 1974/Vol. 31, No. 7

ARIZONA MEDICINE

JOURNAL OF ARIZONA MEDICAL ASSOCIATION

MEDICAL SOCIETY OF THE UNITED STATES AND MEXICO

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The credits for the article "Voluminous Diarrhea Associated with Salmonella Infantis, Infection in Two Sibling" by Lonnie K. Zeltzer, M.D.; David R. Nalin, M.D.; Norbert Hirschhorn, M.D. should read From the Dept. of Pediatrics, U of A Medical Center, the Dept. of Medicine Johns Hopkins Medical School, the Dept. of Pathobiology, Johns Hopkins School of Hygiene and Public Health. This study supported by NIAMDD Contract 71-2260. The article appeared on page 159 of the March issue of *Arizona Medicine*.

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Is there a need for a drug compendium?

A drug compendium of the type I envision would fill a definite need for the practicing physician. Such a compendium would give him all the information necessary for using

a drug intelligently, and it would do so in a clear, concise, convenient, objective and balanced fashion.

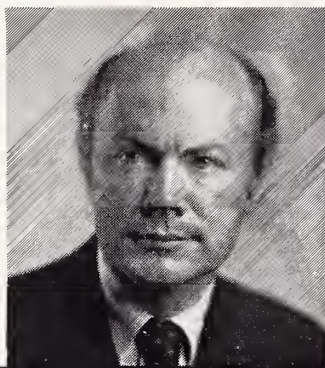
What a Compendium Should Contain

I believe the compendium should inform the doctor what a drug will do, when he should use it for what type of patient, for how long, in what dose, what benefits his patient is likely to obtain, the risks involved, and cross-reaction with other drugs.

The information would be based on the package insert and have the same legal status. In fact, a complete compendium with complete and current information might even eliminate the necessity

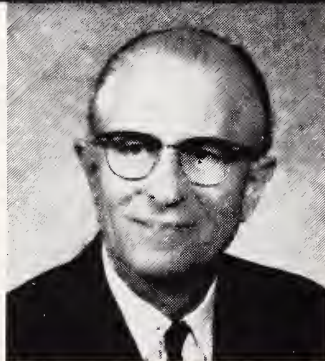
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Henry E. Simmons, M.D.
Deputy Assistant
Secretary for Health
Department of Health,
Education and Welfare



Maker of Medicine

Joseph F. Sadusk, Jr., M.D.
Warner-Lambert Company



A drug compendium, or preferably compendia, should, I believe, be private, not federal, in sponsorship. They should contain comprehensive listings of drugs available for prescribing. They should be single, legibly printed volumes of reasonable size, updated quarterly or semiannually and completely revised every year.

Function of a Compendium

A compendium should furnish the following information on drugs in the following order: indications for use, side effects, adverse drug reactions, contraindications, drug interactions, drug dosage and the dosage forms marketed. Drug prices should not be included because they vary so widely and change rapidly.

No compendium should set forth drugs of choice or discuss relative efficacy. Such questions must be left for the practicing physician to decide, whether on the basis of the medical literature, his own clinical experience, advice of colleagues, information supplied by manufacturers, and so on.

Nor should a compendium undertake to educate the doctor on how to use drugs. Rather, it must be a reference source designed primarily to refresh his memory as to drugs he may not use regularly. It

Opinion
&
Dialogue

for a package insert in many instances. This would constitute a substantial saving for the manufacturer.

By a complete compendium, I do not mean a volume of prohibitive size. You don't need a book describing 25,000 products with an enormous amount of repetition. Rather, drugs should be arranged by class. Mutually applicable information would be provided, along with brief discussions pinpointing differences in specific drugs of that class. Listings would be cross-indexed in a useful way.

Other Available Documents as Sources of Information

Existing references such as PDR and the AMA Drug Evaluation are obviously useful but they are incomplete. Either they are not cross-referenced by generic name and do not group drugs with similar characteristics, or they do not list all the available and legally marketed drugs. And some of those omitted may be very useful.

should in no way imply control over the practitioner's prerogatives.

Why Another Compendium?

A practicable, single-volume compendium cannot, nor is it necessary to, include all drugs on the market today. From my practice of internal medicine for some 15 years, my experience as a consultant, and as a faculty member of four or five medical schools, I would estimate that a doctor uses only 30 to 35 drugs regularly. The 1972 Physicians' Desk Reference, incidentally, contained about 2,500 entries.

As to whether there should be a federal compendium, in my opinion, as stated earlier, the answer is easy—there should *not* be one. The proposal assumes that existing compendia are inadequate. We're not sure of that at all. Whatever its imperfections, the present drug information system in the U.S. is open, multifaceted, pluralistic and extensive. Good compendia exist, as well as other ample sources on drug therapy, ranging from journal literature through AMA Drug Evaluation to company materials. Not all physicians may use such sources as often or as well as they should, but that is the fault of the man, not of the sources.

In any event, rather than pro-

On the other hand, drugs made by more than one supplier, tetracycline for example, may be fully described a dozen times in the same book.

While perhaps PDR could be rearranged and cross-indexed with generics included, and while the AMA Drug Evaluation might also be modified and expanded, I am not sure that the end result would have all the attributes required for a useful compendium. At the same time, you would run the risk of amassing a voluminous and unwieldy tome.

Should Editorial Comments Accompany the Listings?

Subjective judgments, in my opinion, have no place in a compendium. However, if there is substantial evidence based on a sound body of science concerning relative efficacy of several drugs, certainly that information should be included. The committee of experts compiling and editing a particular section would also have to assess

duce another book, it makes much more sense to work on improving existing compendia, and perhaps they could, as knowledge advances, include more accumulated clinical data and experience, and more information on drug interactions and adverse reactions.

Implications of a Federal Compendium

Take a hard look at the implications of a federal compendium. It would have the force of law, virtually dictating what drugs to use and how to use them. In effect, it would be a regulatory document with legal or quasi-legal status, posing medical/legal problems similar to those the doctor may now encounter if and when he departs from the provisions of the package insert. A compendium under federal aegis would tend to restrict decisions on drug therapy to one orthodox level—a most dangerous trend for medicine.

New Compendium—A Medical Option

I detect no ground swell of initiative or support whatsoever for a federal compendium—or, for that matter, for a new compendium of any type. A 1969 PMA survey conducted by Opinion Research Corporation found that only 15 per

and indicate instances where a meaningful difference between drugs is pertinent.

Sponsorship, Compilation and Editing

Producing a book like this would undoubtedly be difficult and demanding. It would obviously take a great deal of talent and expertise, and would require a varied and experienced group, ranging from writers and editors to highly skilled clinicians and pharmacologists. Style, format and clarity of language would play an important part in determining the usefulness of the book. And it should be updated periodically and completely revised annually.

I have no opinion whether the government or the private sector should sponsor and/or finance the compendium. What is most important is that the compendium be an authoritative, objective and useful source of information for the doctor to have at hand as a ready reference.

cent of those physicians interviewed felt a new compendium was needed. And a large majority did not favor the involvement of the federal government if one were to be created, preferring instead a nongovernmental consortium.

Even if we come to a time when the medical profession itself opts for a new kind of compendium, it should be handled and financed, ideally, outside both government and industry. Final review and editorial authority could be delegated, say, to specialty bodies and medical societies—but above all, *not* the government.

Surely the health care system in the United States has far more vital matters to consider than the extensive cost and effort that would have to go into the preparation and maintenance of a new, monolithic compendium, and especially one bearing the imprimatur of the federal government.

Opinion & Dialogue

What is your opinion, doctor? We would welcome your comments.

The Pharmaceutical
Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005



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Address all correspondence to the
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810 W. Bethany Home Rd.,
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CONTRIBUTIONS

The Editor sincerely solicits contributions of scientific articles for publication in ARIZONA MEDICINE. All such contributions are greatly appreciated. All will be given equal consideration.

Material submitted for publication in ARIZONA MEDICINE should conform to the following policies:

1. Manuscripts, including references or bibliography, should be typewritten, double-spaced, on one side of the paper only, and the original and a carbon enclosed.

2. Be guided by the general rules of medical writing as followed by the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

3. Although the Editors try to catch inaccuracies, the ultimate responsibility is the author's.

4. Articles are accepted for publication only if they are contributed exclusively to this Journal. Ordinarily, contributors will be notified within 60 days if a manuscript is accepted for publication. Every effort will be made to return unused manuscripts.

5. The Journal reserves the right to edit all material.

6. Reprints will be supplied to the author at printing cost.

Rondomycin® (methacycline HCl)

CONTRAINDICATIONS: Hypersensitivity to any of the tetracyclines.

WARNINGS: Tetracycline usage during tooth development (last half of pregnancy to eight years) may cause permanent tooth discoloration (yellow-gray-brown), which is more common during long-term use but has occurred after repeated short-term courses. Enamel hypoplasia has also been reported. **Tetracyclines should not be used in this age group unless other drugs are not likely to be effective or are contraindicated.**

Usage in pregnancy. (See above **WARNINGS** about use during tooth development.) Animal studies indicate that tetracyclines cross the placenta and can be toxic to the developing fetus (often related to retardation of skeletal development). Embryotoxicity has also been noted in animals treated early in pregnancy.

Usage in newborns, infants, and children. (See above **WARNINGS** about use during tooth development.)

All tetracyclines form a stable calcium complex in any bone-forming tissue. A decrease in fibula growth rate observed in prematures given oral tetracycline 25 mg/kg every 6 hours was reversible when drug was discontinued.

Tetracyclines are present in milk of lactating women taking tetracyclines.

To avoid excess systemic accumulation and liver toxicity in patients with impaired renal function, reduce usual total dosage and, if therapy is prolonged, consider serum level determinations of drug. The anti-anabolic action of tetracyclines may increase BUN. While not a problem in normal renal function, in patients with significantly impaired function, higher tetracycline serum levels may lead to azotemia, hyperphosphatemia, and acidosis.

Photosensitivity manifested by exaggerated sunburn reaction has occurred with tetracyclines. Patients apt to be exposed to direct sunlight or ultraviolet light should be so advised, and treatment should be discontinued at first evidence of skin erythema.

PRECAUTIONS: If superinfection occurs due to overgrowth of nonsusceptible organisms, including fungi, discontinue antibiotic and start appropriate therapy.

In venereal disease, when coexistent syphilis is suspected, perform darkfield examination before therapy, and serologically test for syphilis monthly for at least four months.

Tetracyclines have been shown to depress plasma prothrombin activity; patients on anticoagulant therapy may require downward adjustment of their anticoagulant dosage.

In long-term therapy, perform periodic organ system evaluations (including blood, renal, hepatic).

Treat all Group A beta-hemolytic streptococcal infections for at least 10 days.

Since bacteriostatic drugs may interfere with the bactericidal action of penicillin, avoid giving tetracycline with penicillin.

ADVERSE REACTIONS: Gastrointestinal (oral and parenteral forms): anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis, inflammatory lesions (with monilial overgrowth) in the anogenital region.

Skin: maculopapular and erythematous rashes; exfoliative dermatitis (uncommon). Photosensitivity is discussed above (See **WARNINGS**).

Renal toxicity: rise in BUN, apparently dose related (See **WARNINGS**).

Hypersensitivity: urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus.

Bulging fontanels, reported in young infants after full therapeutic dosage, have disappeared rapidly when drug was discontinued.

Blood: hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia.

Over prolonged periods, tetracyclines have been reported to produce brown-black microscopic discoloration of thyroid glands; no abnormalities of thyroid function studies are known to occur.

USUAL DOSAGE: Adults—600 mg daily, divided into two or four equally spaced doses. More severe infections: an initial dose of 300 mg followed by 150 mg every six hours or 300 mg every 12 hours. Gonorrhea: In uncomplicated gonorrhea, when penicillin is contraindicated, 'Rondomycin' (methacycline HCl) may be used for treating both males and females in the following clinical dosage schedule: 900 mg initially, followed by 300 mg q.i.d. for a total of 5.4 grams.

For treatment of syphilis, when penicillin is contraindicated, a total of 18 to 24 grams of 'Rondomycin' (methacycline HCl) in equally divided doses over a period of 10-15 days should be given. Close follow-up, including laboratory tests, is recommended.

Eaton Agent pneumonia: 900 mg daily for six days.

Children—3 to 6 mg/lb/day divided into two to four equally spaced doses.

Therapy should be continued for at least 24-48 hours after symptoms and fever have subsided.

Concomitant therapy: Antacids containing aluminum, calcium or magnesium impair absorption and are contraindicated. Food and some dairy products also interfere. Give drug one hour before or two hours after meals. Pediatric oral dosage forms should not be given with milk formulas and should be given at least one hour prior to feeding.

In patients with renal impairment (see **WARNINGS**), total dosage should be decreased by reducing recommended individual doses or by extending time intervals between doses.

In streptococcal infections, a therapeutic dose should be given for at least 10 days.

SUPPLIED: 'Rondomycin' (methacycline HCl): 150 mg and 300 mg capsules; syrup containing 75 mg/5 cc methacycline HCl.

Before prescribing, consult package circular or latest PDR information.

Rev. 6/73



WALLACE PHARMACEUTICALS
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When the focus is on bronchitis due to susceptible strains of *H. influenzae* and pneumococci*

Rondomycin[®] 300 mg.
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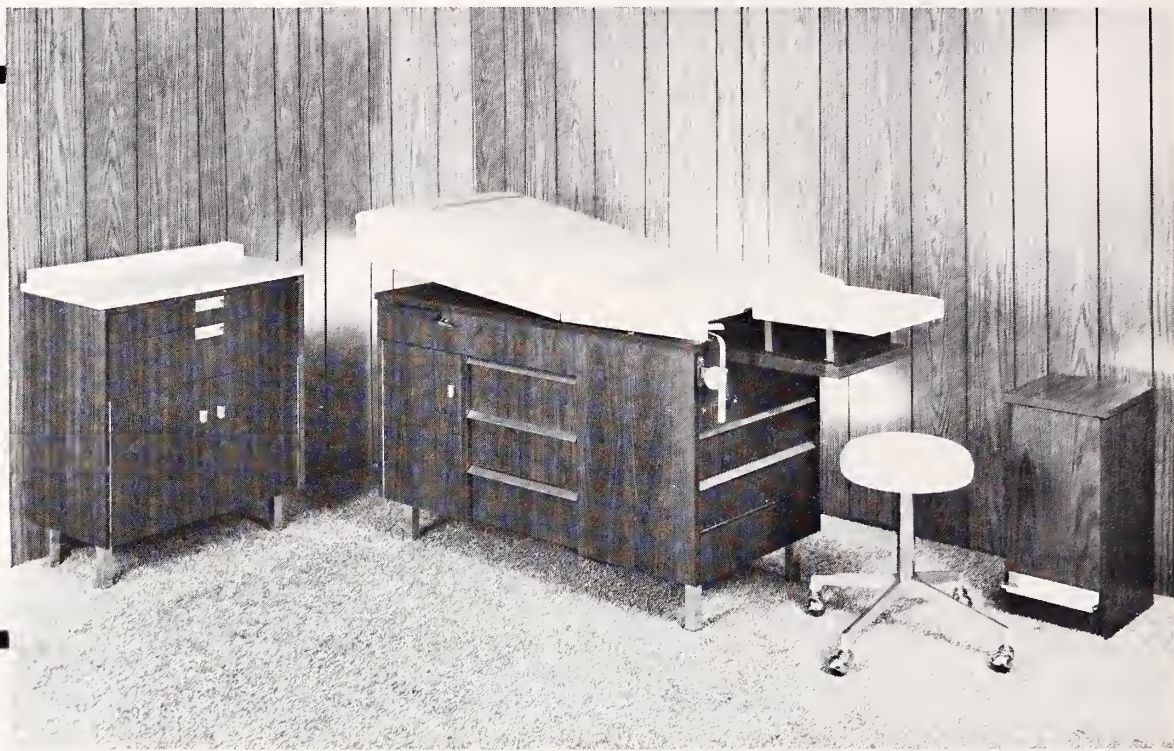
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Before prescribing, see complete prescribing information in SK&F literature or PDR. The following is a brief summary.

Indications: Edema associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. Also, mild to moderate hypertension.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (> 5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently — both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Anti-hypertensive effects may be enhanced in post-sympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

Supplied: Bottles and Single Unit Packages of 100 capsules.

SK&F CO.

Kenilworth, N.J. 07033

Subsidiary of SmithKline Corporation

Serum Potassium Level Drops During Long-Term Exercise, *Medical Tribune*, July 4, 1973.

No implication that 'Dyazide' is useful in preventing K^+ loss in athletes is intended.

THE MARATHON WINNER LOSES SERUM POTASSIUM

as a result of intensive physical training.*



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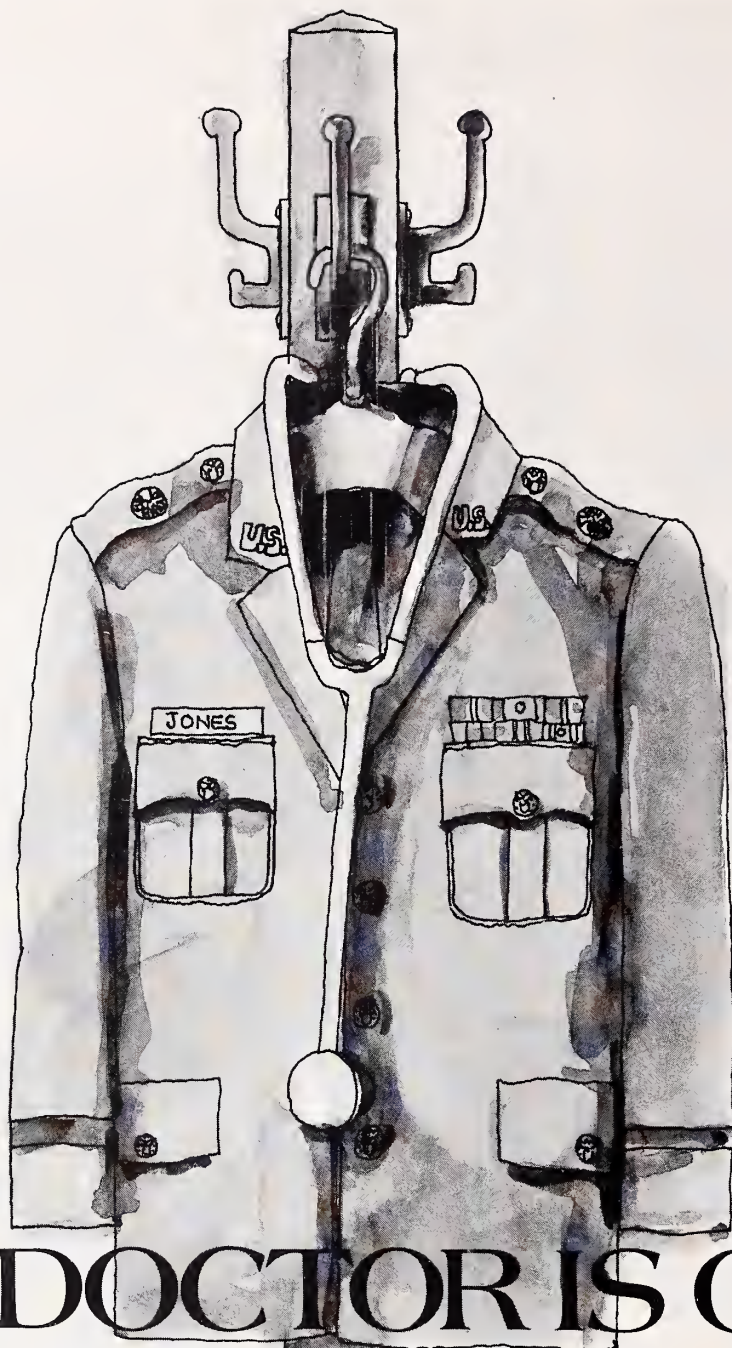
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THE DOCTOR IS OUT

He's enjoying a 30 day paid vacation, with his family in ski country.

Last year Doctor Jones, an Air Force Medical Corps Major, and his family spent their vacation in Switzerland. They were stationed with the Air Force in Europe. He hasn't said what they have planned for next year, but he has been working on his private pilot's license at the base flying club and his wife is learning Spanish at the education center.

Doctor Jones has been in the Air Force for 4 years now. That means he can retire in less than 16 years with an assured income. He will also be young enough to begin a second successful career.

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Original Articles

USE OF CROMOLYN SODIUM IN CHILDHOOD ASTHMA

HUGH C. THOMPSON, M.D.

HIRMAN D. COCHRAN, M.D.

This is a very timely article on a newly introduced medication in the treatment of asthma. The authors, in a very concise fashion have reviewed the pharmacology, medications and results of a double blind crossover study. All physicians treating childhood asthma will find this a rewarding article

Disodium Cromoglycate, herein identified as Cromolyn Sodium (CS) (Aarane,^R Intal[®]), has been released by the FDA for use in severe perennial asthmatics. This paper describes the properties and modes of action of the drug, the results of a double blind, cross-over study in 39 severe chronic young asthmatics, and gives the authors' suggestions for use of CS in asthma.*

PROPERTIES AND MODE OF ACTION

CS is an odorless, white crystalline powder

From: Dept. of Pediatrics, U of A College of Medicine (Dr. Thompson) The Tucson Clinic, Tucson, AZ (Dr. Cochran). Reprint requests to 1501 N. Campbell Ave., Tucson, AZ 85724 (Dr. Thompson).

*Study supported by a grant from Syntex Laboratories.

moderately soluble in water. It is absorbed from the lungs, but only minimally from the gastrointestinal tract. It is excreted unchanged in the bile and the urine.¹

CS has few general pharmacological effects. The most important is the local inhibition in vitro of degranulation of sensitized mast cells and the inhibition of release of histamine and SRS-A, the principal mediators causing reaginic, Type 1 allergic or extrinsic asthma.² It also similarly inhibits the non-reaginic, chemically induced liberation of mediators by phospholipase A and Dextran. It prevents both the immediate and late 4-6 hour airway obstruction in patients with dual bronchial reactions.² Godfrey,³ Davies⁴ and others have found CS effective in preventing exercise induced asthma, although the mode of action is uncertain. Other investigators doubt this action. CS has no bronchodilator or anti-histaminic effect, nor does it possess anti-inflammatory or steroid like properties.² There is, therefore, no basis for its use for the relief of wheezing which has already commenced.

Administration is by inhalation of 20 mg of micronized powder (particle size 2-6 microns) mixed with 20 mg of lactose. The drug is packaged in capsules and inhaled with the use of a special inhaler. The technique and precautions are clearly explained in material distributed with the package. At least for the first two months the drug is usually taken 4 times a day. Children under six may be incapable of properly using the inhaler.

Side effects in humans are in general mild and transient. They include an occasional easily reversible rash — usually around the face. Urticaria has been rarely reported. One 40-year-old woman had three episodes of fever, pneumonitis and eosinophilia associated with its use.⁵ No deaths or renal or cardiovascular complications have been attributed to use of CS in humans.

Numerous double blind, cross-over studies throughout the English-speaking world, especially in Britain,⁶ have demonstrated varying degrees of efficacy in the majority (usually about 70%) of patients with extrinsic (reaginic) or mixed asthma. The effect is greater in patients whose age of onset was less than 4 years and in patients under 17 years of age.²

Long term studies have shown continued efficacy in the majority of patients for a year or more.⁷ In one study the frequency of the dose

was successfully reduced to 3, 2 or occasionally 1 times a day without loss of benefit.

Favorable results have consisted of reduction in symptoms and medications taken, including steroids. Improvement in pulmonary function has varied, with some investigators reporting no change and other documenting improvement in F.E.V. 1 and other parameters for as long as one year.

STUDY OF EFFICACY IN CHILDREN

The multicenter, double blind, cross-over study of which the authors have been a part was undertaken because previous studies have suggested a carry over of up to 4 weeks in improvement where the active drug was given before the placebo.² (Fig. 1) This tended to minimize the

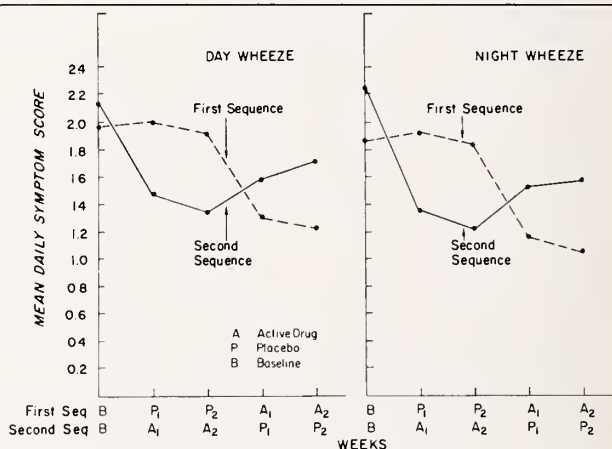


FIGURE 1

The relationship of mean daily scores to drug order effect for symptoms of day and night wheeze in 252 patients. First sequence signifies administration of placebo first; second sequence refers to administration of drug first.

From Bernstein, I. L., Siegel, S. C., Brandon, M. L., Brown, E. B., Evans, R. R., Feinberg, A. R., Friedlaender, S., Krumholz, R. A., Hadley, R. A., Handelman, N. I., Thurston, D., and Yamate, M.: A Controlled study of cromolyn sodium sponsored by the Drug Committee of the American Academy of Allergy, J. Allerg. Clin. Immunol. 50: 235-245, 1972.

difference between the symptoms of the two halves of the study. If the placebo was given first a much more clear cut difference occurred.

Our study lasted 12 weeks. The first two weeks constituted a baseline period to ascertain how much asthma and medication the patient had at that time. The next 4 weeks the patient received either the active drug* or a placebo. A no-treatment "washout" period of 2 weeks followed to at least partially eliminate any carry over from the effect of CS. The last 4 weeks the patient received whichever preparation, active or placebo, he had not previously had. Detailed symptom

*Cromolyn Sodium (Aarane) supplied by Syntex Laboratories

TABLE 1
PATIENT RECORDS:
SYMPTOMS and RATING INDICES

Wheeze	}	0—None
Breathlessness		1—Trivial
Tightness		2—Mild
Cough		3—Annoying
		4—Moderate
		5—Severe
		6—Very severe
Sputum		
No. of isolated asthma attacks		

(Table 1) and medication scores (Table 2) were kept daily by the parents. The patient was seen

TABLE 2
PARENT MEDICATION SCORE INSTRUCTIONS

Corticosteroid	}	List exact name of each medication, unit strength and dosage program
Pocket inhaler		
Oral medications		
Rectal medications		
Inject. medications		
Other		

every 2 weeks by the physician. Complete blood counts, urinalyses and SMA — 12 determinations were performed before, during and at the end of the study. At the end of 12 weeks, the parents expressed preference for one or the other preparations and indicated whether they wished to have the patient continue on the drug. The code was then broken. If CS had apparently been useful, the patient was continued on it in an open study.

Data concerning the patients are shown in Table 3. Forty children commenced the study and 39 completed the 12-week study. One child was withdrawn by the physician before starting

Table 3
C. S. — DATA ON STUDY PATIENTS

26 MALES, 13 FEMALES
AGES 7 - 20 (1 - 26, 1 - 28)
DURATION ASTHMA: 2 - 17 YRS — MEAN 9 YRS
AVERAGE AGE OF ONSET BETWEEN 1½ AND 2 YRS (2 older patients excluded)
AVERAGE ESTIMATED SEVERITY PRIOR TO STUDY 4 ON A SCALE OF 0 - 6
32 HAD HAD STEROIDS; 16 ON STEROIDS AT START

CS because of a different illness. There were 26 males and 13 females. Ages ranged between 7 and 20 except for two individuals aged 26 and 28. Duration of the asthma varied between 2 and 17 years with a mean of 9. The average age of onset was between 1½ and 2 years except for the two older patients. The mean severity of the asthma in the 2 weeks prior to the study was estimated by the parents as 4 on a scale of 1-6. Based on history and skin test results, all the patients had asthma from both extrinsic and intrinsic factors.

Thirty-two patients had had steroids and 16 were on them at the time of the study, with doses ranging from 2½ mgm to 20 mg of prednisone per day. Nineteen patients had the CS first, 20 the placebo.

RESULTS

At the end of the study, 75% of the families (parents or patients) correctly identified CS as the active preparation, preferred it and have continued its use for periods up to 10 months. (Table 4) Patients were requested not to discontinue or reduce steroid usage during the

Table 4
C. S. — STUDY RESULTS

28 CORRECT IDENTIFICATION AND "MUCH PREFERRED"
2 CORRECT IDENTIFICATION AND "SLIGHTLY PREFERRED"
9 INCORRECT IDENTIFICATION — C. S. FIRST
37 ENTERED OPEN STUDY
32 CONTINUED OPEN STUDY FOR UP TO 10 MONTHS
ABOUT HALF MAINTAIN IMPROVEMENT WITH FEWER DAILY DOSES
75% CORRECT IDENTIFICATION, PREFERRED, CONTINUED
7 OF 16 HAVE STOPPED STEROIDS

study but 7 of 16 have subsequently been able to markedly reduce or stop steroids while on CS.

Five patients submitted incomplete reports so statistical analysis* was possible for only 34 patients. Due to known carry-over effects of the use of corticosteroids, 13 patients who exhibited an irregular use of these drugs on even one day during their 12-week study periods were eliminated from the data base for most of the analyses. The primary reason for this action was that the added factor of corticosteroid usage would have been very difficult to incorporate into the selected methods of statistical analysis. Of the remaining 21 patients,** the following conclusions resulted from the statistical analyses.

All symptoms considered in the study received on the average lower daily severity scores when

*Statistical analysis was performed by J. D. Johnson, Ph.D., Biostatistics Department of Syntex Corporation.
**This patient subgroup includes both non-corticosteroid users and stable corticosteroid users.

FIGURE 2

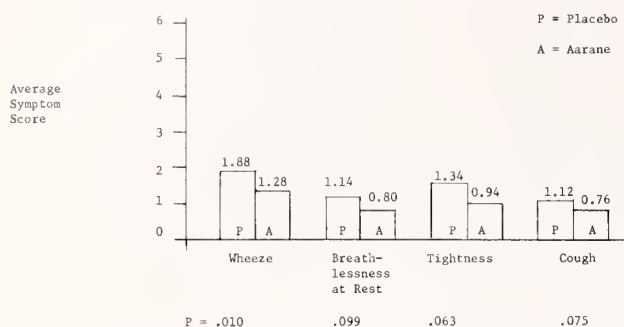


FIGURE 2

Estimated Average Daily Scores for All Patients Stable in Their Use of Corticosteroids (N = 21)

the patient was using CS. The most significant difference between the placebo and CS scores was seen in the symptoms of wheeze and number of attacks ($p = .010$ and $.017$, respectively).

Figure 2 shows the comparison between the estimated average patient scores over the entire 4-week drug periods for the 4 symptoms of wheeze, breathlessness at rest, tightness and cough.

If the analysis was restricted to data from the subset of the above patients who were also stable in their use of oral medication and pocket inhalers or who used less of both medications while using CS, any confusion between the effect of CS and the effect of other medication is minimized. The analyses of this data show that such patients on the average exhibited an even greater difference between their CS and placebo scores than when all patients are combined. (Fig. 3)

FIGURE 3

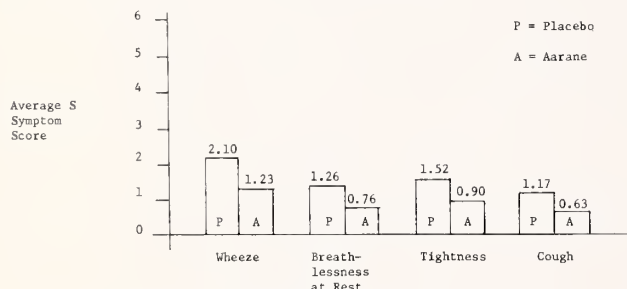


FIGURE 3

Estimated Average Daily Scores During 4-Week Drug Periods for All Corticosteroid-stable Patients Also Stable in Their Use of Other Medication or Using Other Medication While on Aarane (N = 17)

USE OF OTHER MEDICATION

Of the 21 corticosteroid-stable patients, all used at least once either a pocket inhaler or oral

medication (or both) during the two four-week drug periods. Both the use of pocket inhalers and oral medication decreased on the average when the patient was using CS. In particular, the average use of oral medication for the patients for the four weeks while on placebo is 45.4 doses and while on CS is 25.6 doses, a 44% reduction.

Other statistical comparisons were made with similar results. In summary, the trends of reduced symptomatology in addition to the highly significant reduction in the use of oral medication while using CS demonstrated that this drug was indeed efficacious in the treatment of the patients in this study.

SIDE EFFECTS

Several children coughed a few times immediately after inhalation of the powder (either placebo or CS) but in no case was this disabling. Three patients had an increase in asthma but finished the study. Three patients developed a mild papular eruption around the mouth. This was easily prevented by having the child wash the face after inhaling. No significant abnormal laboratory findings were encountered in this study.

RECOMMENDATIONS

Based on this and many other studies it is suggested that CS deserves a trial in severe chronic young asthmatics, especially those patients with extrinsic or mixed asthma and those who require steroid therapy. CS should also be tried before exercise in those children who regularly develop asthma after sports. Because of the frequent doses needed and the annoyance caused by the use of an inhaler, CS is not recommended for sporadic or milder cases well controlled by the usual bronchodilators. Physicians and patients alike must remember that CS does not relieve acute attacks of asthma once they have begun.

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A STUDY OF SERUM IgE IN ATOPIC PATIENTS

DANIEL H. GOODMAN, M.D.

HAROLD HICKS, M.D.

IgE represents a class of immunoglobulin which is responsible for many common phenomena noted by the practicing physician: hay fever, asthma, anaphylaxis, and skin reactions. This paper is a review of the nature, behavior and clinical manifestations related to the presence of IgE in the serum. Understanding of this immunoglobulin can lead to a greater understanding of many allergic phenomena.

The serum antibody associated with human allergic disease was first detected by Prausnitz and Kustner¹ in 1921. Prausnitz, who was sensitive to fish, injected his serum into the skin of Kustner who was not allergic. Re-injection of the same spot of skin twenty-four hours later with fish antigen caused a marked wheal and flare reaction — now immortalized as the P-K reaction. Other names in use for this allergic antibody include atopic reagin,² skin-sensitizing antibody and, more recently, homocytotropic antibody. Ishizaka³ in this country and Johansson and Bennich⁴ in Sweden have demonstrated that reaginic activity in serum of atopic patients is associated with a distinct immunoglobulin class immunoglobulin E (IgE). IgE is a glycoprotein with a sedimentation coefficient of 7.9 S and molecular weight of 196,000. It has the lowest rate of synthesis and shortest half-life of all

the immunoglobulin classes. The human fetus can synthesize IgE as early as eleven weeks. IgE does not pass the intact placenta. Reagin represents a kind of antibody related with a strong etiological association with certain diseases of humans including hay fever, allergic asthma, anaphylaxis, eczema, urticaria and angioneurotic edema.

Allergists have known since 1921 that there is a good association between wheal and erythema production by direct skin test and the presence of serum reagins. Reaginic antibody has a particular propensity to bind lastingly to certain cell surfaces, especially circulating basophils and to tissue mast cells. When reaginic antibody from the serum of a sensitized person is injected intracutaneously into an unsensitized person it is retained for 9 to 14 days. If the appropriate allergen is subsequently injected, IgE attached to the cell surface interacts with allergens to liberate vasoactive humoral mediators, i.e., his-

From: The Allergy & Immunology Clinic, Maricopa County General Hospital, and Allergy-Asthma Clinic, Ltd., Phoenix & Mesa, AZ. Reprint Requests to 31 W. Camelback, Phoenix, AZ 85013 (Dr. Goodman)

tamine, etc., from the cell, and these in turn are responsible for the wheal and flare response typical of an immediate type I reaction. A similar sequence of events is thought to take place in the bronchial wall and induce the immediate type I IgE mediated asthmatic response.

METHODS

The sera of sixty-one (61) adult atopic individuals chosen at random were studied for IgE levels, using a commercially available Radioimmunoassay Procedure (Pharmacia Laboratories, Piscataway, N.J.). Thirty-five patients were from the Allergy Asthma Clinic, Ltd. and 26 were from the Allergy Clinic of the Maricopa County Hospital. All patients had dermal (pressure-puncture) tests followed by intradermal tests with antigens that gave initial negative reactions to pollens, fungi, epidermals and miscellaneous inhalants. No skin tests for foods were performed. Patients had the following atopic disorders either singly or in combination: Asthma of known (extrinsic) or unknown (intrinsic) origin; rhinitis, seasonal, perennial or perennial with seasonal exacerbations; atopic eczema; nasal polyposis.

RESULTS

Skin test reactivity correlated well with high serum IgE levels. Forty-three percent (43%) of the patients from the Allergy Asthma Clinic had serum IgE levels in the range of 700 to 2350 Iu/ml. There was a distinct relationship between seasonal (extrinsic) allergic asthma and/or rhinitis and high serum IgE levels. Patients with perennial allergic rhinitis or chronic asthma, particularly in the older age group with poor skin reactivity, had low or normal serum IgE levels, i.e., less than 700 Iu/ml. Similarly, patients with nasal polyposis had serum IgE levels below 700 Iu/ml. Fourteen patients who had received immunotherapy for three or more years had normal

serum IgE levels.

Forty-four out of a total of 61 adult patients (72%) had perennial symptoms of either asthma or rhinitis or a combination of both. These patients had demonstrated poor skin reactivity to allergens. This may explain the generally lower serum IgE values than that found by other investigators who included children in their studies. Wood and Oliver have shown that allergic children in the range of five to ten years have high levels of serum IgE.⁵

DISCUSSION

In general, results of our studies were similar to other investigators.^{6, 7, 8} Total IgE serum levels at 700 Iu/ml and over have been found in about 60% of adults and children with extrinsic asthma and higher levels are frequently found in atopic eczema. Increased levels vary in relation to exposure to allergen, rising in the pollen season in pollen sensitive people and during the initial phase of desensitization procedures. The half-life of IgE in the serum is about two or three days. Raised levels, therefore, presumably indicate that the increased amounts are being formed continuously in atopic persons. There is a relationship between the serum level of allergen-specific IgE, the clinical history and skin test responses.

Elevated levels of IgE in conditions other than classical allergy have been reported.⁹ These include subjects with pulmonary hemosiderosis, hypersensitivity pulmonary aspergillosis, visceral larva migrans syndrome, celiac disease, Laennec's cirrhosis, multiple myeloma, ascariasis and other nematode infections. Patients with acral dermatitis, a nonatopic pruritic, papulovesicular and keratotic dermatitis of the hands and feet, have markedly elevated IgE levels up to 100,000 Iu/ml.¹⁰ Mast cells are present in large numbers in the dermis and epidermis of such patients.

It is resistant to all treatment except administration of corticosteroid drugs.

The total IgE in exocrine secretions (nasal, bronchial, gastrointestinal mucosa, etc.) has been found to be increased in patients with atopic symptoms. In contrast to IgA endosecretions which are mainly linked to an additional peptide chain called the secretory piece, IgE in secretions appears to have no attached secretory piece and is identical in nature to serum IgE. It appears that changes in the amount of IgE fixed to cell surfaces is of even greater importance than changes in the serum or exocrine secretions.

The amount of IgE coating leukocytes from sensitized persons can be measured by the quantitative release of histamine after *in vitro* challenge of sensitized leukocytes by allergen. In patients with asthma or hay fever due to single extrinsic allergens there is a good correlation between increases in total IgE and the specific IgE in the serum and that attached to cell surfaces.

In asthma of undetermined origin (intrinsic) the total serum levels of IgE are usually normal or low and these correspond to the negative clinical history and the negative skin responses to common allergens. However, *increased amounts of IgE have been detected on the leukocytes* of about 60% of patients with intrinsic asthma.

Nasal secretions and nasal polyps contain concentrations of IgE that are considerably higher than serum values for IgE in the atopic patient suggesting local production.¹¹ Saliva, sputum and tears may contain detectable levels of IgE, especially when derived from atopic patients. Urine contains detectable quantities of IgE which indicates that it is probably produced locally by the mucosa rather than being cleared from the plasma. Plasma cells containing IgE are found among respiratory and intestinal epithelial cells

in humans. Such IgE plasma cells are prominently present in the adenoids and tonsils. Tonsils and adenoids have the highest concentration of IgE in the body.

Occasional cases of isolated IgE deficiency occurring with chronic respiratory infections have now been reported. This suggests that IgE may have a useful role in protecting the respiratory epithelium from infection. The production of IgA and IgE may be linked with one another and their absence may be associated with sinopulmonary infections.

SUMMARY

IgE represents a distinct class of immunoglobulin. It is responsible for type I wheal and flare immediate skin test response and for hay fever, asthma, anaphylaxis and other atopic manifestations. While concentrations of serum IgE correlate well with skin test sensitivity to antigens in patients with extrinsic hay fever and asthma, the local concentration of IgE is higher in nasal polyps, tonsils and adenoids, nasal and bronchial secretions.¹²

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ANOSMIC HYPOGONADOTROPIC HYPOGONADISM KALLMAN'S SYNDROME – A CASE HISTORY COMPLICATED BY CYSTIC FIBROSIS

CHARLES D. LOX, Ph.D.

JOHN R. DAVIS, M.D.

C. D. CHRISTIAN, M.D.

M. W. HEINE, M.D.

The association of anosmia and hypogonadism has been reported with increasing frequency over the past several years. This case report of Kallman's Syndrome emphasizes the importance of testing for anosmia in those patients who manifest abnormalities in their sexual development.

In 1944 Kallman¹ reported the relationship in both males and females of hypogonadism and anosmia, and that the condition appeared to be an X-linked trait. The syndrome was reported to be characterized by both a lack of tuberal nuclei in the hypothalamus and olfactory bulb aplasia.² This was suggestive of a hypothalamic defect resulting in a failure of the secretion of gonadotrophin releasing hormones.³ Also reported was Leydig cell atrophy⁴ and a decreased number of primordial follicles.⁵

Several reports detail the use of clomiphene citrate to stimulate the hypothalamic region to secrete the releasing hormones^{3,6} with varied success.

Clinical and endocrine evaluation of a patient with symptomology suggestive of Kallman's syndrome is presented.

METHODS

Luteinizing hormone (LH), follicle-stimulating hormone (FSH), testosterone (T), estrone (E₁), estradiol (E₂), progesterone (P) and total thyroxine (T₄) were all determined by radioimmunoassay.⁷⁻¹⁰

Sera was stored frozen at -20°C until analyzed. Clomid (Merrill) was given orally, 50 mgs/day for 5 days.

CASE HISTORY

N.K. is an 83 pound, 61¾ inch, 22-year-old white female with primary amenorrhea and cystic fibrosis. When the patient was first seen, she had mild hirsutism, somewhat normal axillary and pubic hair, very little breast development, and poorly developed genitalia. Pubarche was at age 16 with two days of bleeding and no subsequent discharge since. Withdrawal bleeding occurred following treatment with Ortho-Novum, but was not spontaneous thereafter.

From: U of A Medical Center, Tucson, AZ; Dept. of OBG (Dr. Lox and Dr. Heine) Dept. of Path. (Dr. Davis). Reprint requests to Dr. Lox.

No withdrawal bleeding occurred after 3 days of Provera. Skull x-rays showed a normal sella turcica and was considered to be normal in general. The 17 keto and hydroxysteroids in the urine were both low (3.9 and 2.59 mgs/24 hrs.) as was the creatinine. Blood lymphocyte karyotyping revealed a 46 XX chromosome complement on two occasions, with 11 and 16 percent barr body counts.

There appears to be no anosmia in the immediate family. The patient has 3 siblings, one with children and the other two with normal menstrual cycles. The patient was unresponsive or unable to distinguish cigarette smoke, coffee odor or alcohol.

RESULTS

On early outpatient visits blood was collected for chromosome and endocrine evaluation. The hormone levels on one of these visits can be seen in Table 1.

TABLE 1. Serum hormone levels of N.K. during initial evaluation.						
	mIU/ml	Picograms/ml		Micrograms/100 ml		
	LH	FSH	T	E ₂	P	T ₄
	0°	0°	257	5°	57°	14

° Below normal values for reproductive age females.

To test the ability of the hypothalamic-hypophyseal axis to respond to exogenous stimulation, a course of elomid treatment was initiated. The endocrine results of that treatment can be seen in Table 2.

TABLE 2. Effect of 5 days of clomid (50 mgs) on N.K. serum hormones.						
	mIU/ml		Picograms/ml			
Day	LH	FSH	E ₁	E ₂	P	
0	1°	3.3	0°	36°	370°	
4	1°	4.5				
5	1.25°	5.5	5°	54°	611	
6	1.25°	4.5	19°	54°	461°	
7	1°	2.8	6°	32°	375°	

° Below normal for the periovulatory period

The patient did not cycle as a result of the elomid treatment.

COMMENT

The association of anosmia and a lack of sexual development in both sexes is becoming and more noted. Of clinical importance is the fact that this condition appears to be genetically passed on, and has now been reported to be a dominant trait.¹¹

The low to absent gonadotrophin levels seen in this patient is in keeping with the findings of others.^{3, 6, 11, 12} The use of elomiphene as an endocrine gland stimulator in this patient (Table 2.)

illustrates a reduced yet graded response to treatment. Follicle-stimulating hormone and the estrogens (E₁ and E₂) did increase slightly as a result of elomid, yet LH did not, which could partially account for the failure to menstruate after treatment, since estrogen has been shown to be involved in the preovulatory surge of LH.^{13, 14} Boyar³ noted increased gonadotrophin levels after elomid treatment for 30 days, whereas Schroffner and Furth did not see any change after 6 weeks.⁶ This is suggestive that there might be a conditional degree of affliction with Kallman's syndrome, the severity or responsiveness dependent upon the extent of involvement, which was suggested to be a reflection of genetic variability of the syndrome.⁶

Menses and pregnancy have been reported in patients with cystic fibrosis;¹⁵ thus it is felt that this patient's amenorrhea is not solely a result of mucoviscidosis. However, a complete pedigree and chromosomal analysis is in process to evaluate completely the degree of relationship between the two afflictions.

It is suggested that perhaps all patients with delayed or a total lack of sexual maturation be screened for anosmia, with the possible thought of steroid replacement to initiate a more normal sexual development. It is also possible that in these cases a screening of the immediate family for anosmia and sexual development might be useful.

We wish to thank the World Health Organization, National Pituitary Agency and the NIA-MD section of the National Institutes of Health for the materials for the immunoassay of gonadotrophins and support from March of Dimes, grant C-104 and University of Arizona, grant 5010-3150-04.

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DESTRUCTIVE EFFECTS OF POT ON MIND, BODY, AND SEX LIFE

Much has been proclaimed during the past decade that marijuana, i.e. pot or cannabis, is physiologically innocuous, non-addictive and preferable to alcohol in both its immediate effects on the mind and its after-effects on the body.

An intensive 5-year study of habitual marijuana users at the Columbia-Presbyterian Medical Center in New York City and other recent research clearly have demonstrated the destructive effects of pot.

It was not until 1971 that the active ingredient of marijuana was synthesized. This has opened research possibilities considerably. The active ingredient is tetrahydrocannabinol (THC) which has been found to interfere with the body's production of DNA, the genetic material that controls cell division. THC is 10,000 times stronger than alcohol in its effect on either DNA or on the inhibition of reproduction of white blood cells.

The chemical action of marijuana has been found to be cumulative — storage taking place in the fatty constituent of cells (especially brain cells) from 8 to 18 days after exposure. Hence, anyone who smokes pot even once or twice a week is never free of the drug.

Psychometric studies have shown that heavy users of marijuana tend to suffer from such traits as confusion, depression, poor concentration, and in some cases, psychotic episodes. They

tend to be pessimistic, insecure, irresponsible, and non-conforming as compared to population norms. There is a decrease in overall mental performance, a lag in social and emotional maturity, and indifference to family, rules, and conventions. Children may lose interest in school, drop out and even turn to crime. Pot accentuates normal problems of adolescence and adds to the difficulty of controlling impulses.

Two other research groups developed additional important data about pot uses during 1973. The University of Utah experiments demonstrate that over 60% of casual and heavy users of marijuana showed "a significant increase in chromosome breaks." Masters and Johnson of the Reproduction Biology Research Foundation of St. Louis observed that testosterone, the male sex hormone, levels were 44% lower in pot smokers than in non-smokers and that sperm counts were reduced in 35% of pot smokers.

They emphasized that marijuana enters fetuses and advised against the smoking of pot by pregnant women in order to avoid interference with the sexual development of unborn males.

Your Editor cannot subscribe to the popular notion that pot is harmless nor that it should be legalized because it is both harmful and impossible to control. Pot is destructive and should not be legalized. We have too much pollution already. What do you think?

John R. Green, M.D.



Editor's Page

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Dean's Page

MICROCIRCULATORY RESEARCH

The microcirculation plays a key role in the function of the circulatory system in normal and pathological states. The capillary network is the site of exchange of nutrients and waste products as well as the port of entry of various hormones which regulate tissue function. The arterioles and precapillary sphincters regulate flow to and distribution within the capillary network. The venules may influence flow and pressure in the capillaries.

Direct observation of the microcirculation reveals a system of forbidding complexity. Flow through the capillaries surges, ebbs, and occasionally reverses direction as if in response to unseen commands. Red cells bend and fold as they pass into the capillary and through narrow orifices. Rhythmic vasomotion of the arterioles, precapillary sphincters and venules is often apparent.

This behavioral complexity and the inaccessibility of the microcirculation to visual observation in many organs have discouraged most researchers from using direct microscopy. Research on the peripheral circulation, therefore, has generally utilized the "black box" approach of the engineers, which measures blood flow and blood volume of an organ to deduce the behavior of its microcirculatory vessels. The uptake of various diffusible indicators injected into the bloodstream has provided information on the exchange processes. This approach has produced most of our present knowledge about the peripheral circulation. Its disadvantage is that it cannot be used to localize phenomena of interest to a particular portion of the microcirculation. Also, it provides little information regarding the variability of behavior among the individual vessels. As more data are obtained by the indirect approach, the questions of localization and variability loom ever larger. It is difficult to establish whether increased flow through an organ is due to arteriolar vasodilation or opening of A-V shunts, for example.

These obstacles have brought about a rebirth of interest in direct studies of the microcirculation in the past ten years and especially in the past five years. Catalyzing this renewed interest

has been the development of new quantitative techniques for the microcirculation. At present, it is possible to make direct and continuous measurements of flow, pressure, and dimensions within individual vessels observed under the microscope.

The development of new techniques has been possible only because of interest of individuals in engineering and the physical sciences. In addition, some of the fundamental problems of microcirculatory function cannot be solved without sophisticated understanding of fluid mechanics and passive exchange processes. Consequently, the field is now multidisciplinary, perhaps uniquely so; some of the most important advances are being made by people outside the fields of medicine and biology.

One of the centers in the rapidly developing field of microcirculatory research is the University of Arizona. It consists of a number of laboratories in the Departments of Physiology, Chemical Engineering, Optical Sciences, and Mathematics. New techniques for non-invasive measurement of pressure in microcirculatory vessels are being developed by Professors Stephen Jacobs and Marlan Scully in the Optical Sciences Center. Although these studies are still in the preliminary stage, developments to date have been promising. The applicability of these techniques to pressure measurements in the heart and large vessels is also being explored in a related study. Dr. Joseph Gross, Professor of Chemical Engineering, is performing theoretical studies on the exchange processes in the microcirculation using the mathematical techniques developed by chemical engineers for study of such processes in physical systems. Dr. David Lomen, Associate Professor of Mathematics, is studying the problem of passage of red cells through capillaries from the standpoint of lubrication theory. Dr. Robert Gore, Assistant Professor of Physiology, is studying the distribution of pressure in the microcirculation of the intestine. Dr. Paul Johnson, Professor and Head of the Department of Physiology, heads a laboratory which is studying local mechanisms of flow regulation in capillaries and arterioles.

The ultimate goal of these various studies is an overall understanding of behavior of the microcirculation, especially regulatory mechanisms. The information obtained is expected to provide new insights into normal function and eventually into pathological changes.



Clinical Oncology In Arizona

This new section in Arizona Medicine is specifically targeted to the subject of cancer care in the state of Arizona. Recognition of the importance of cancer management has been underscored by the establishment of the conquest of cancer as a national goal. In addition to markedly increase efforts towards support of research through the National Cancer Institute and the American Cancer Society, patient care activities have also been strengthened. In this column, current concepts in cancer management and recent advances in cancer research that are relevant to Arizona, will be discussed each month. Cancer therapy is currently changing at an extraordinarily rapid rate, and the views expressed on this page should not be considered as static recommendations. The editors of this column will select key topics and invite interested physicians and allied health professionals from Arizona to write components related to areas of their expertise in cancer.

Editors: Paul H. Duffey, M.D., F.A.C.P., Hematology-Oncology, The Tucson Clinic, Tucson, Arizona 85716; Sydney E. Salmon, M.D. Head, Section of Hematology and Oncology, University of Arizona College of Medicine, Tucson, Arizona 85724.

MANAGEMENT OF BRAIN METASTASES

ROBERT C. MILLER, M.D.

ROBERT S. HEUSINKVELD, M.D., PH.D.

Brain metastases are among the most frequent causes of serious disability in patients with cancer. Irradiation and surgery are the only effective forms of treatment, for the majority of oncolytic drugs do not penetrate the blood brain barrier.¹ Because metastases to the brain are commonly multiple² and often unresectable, irradiation is the treatment of choice. Irradiation can prevent the development of neurological dysfunction in the majority of patients with brain metastases who present without major neurological deficits³ and can often reverse the manifestations of advanced lesions.

DIAGNOSIS

Motor loss, cranial neuropathies, intellectual impairment, headaches, and seizures are common symptoms of brain metastases. Any of these or other central nervous symptoms in a patient with a documented malignancy should signal a prompt evaluation for cerebral tumor.

The brain scan is the single most useful diagnostic study. The diagnostic accuracy of the brain scan approaches 85%⁴ and it is a quick convenient procedure devoid of morbidity. Plain

From: Division of Radiation Oncology, U of A Medical Center, Tucson, AZ.

films of the skull are less helpful. Lumbar puncture is usually not necessary and may be dangerous in the presence of increased intracranial pressure. Herniation of the cerebellum through the foramen magnum may occur following lumbar puncture and require emergency neurosurgical decompression to prevent death by compression of the medulla oblongata. Craniotomy should be reserved for the few patients with rapidly increasing intracranial pressure, and for cases in which there is doubt about the nature of a mass lesion.³ One is justified in proceeding with palliative irradiation in a patient with a clinical picture of brain metastases, a tissue diagnosis of malignancy at another site, and an abnormal brain scan.

TREATMENT

Once the diagnosis of brain metastasis is established, glucocorticoids can be administered before irradiation to decrease cerebral edema. Although steroids are commonly used with irradiation to reduce intracranial pressure,⁵ it is not certain that their use is routinely necessary, for Hinds et al have discontinued the routine use of steroids in the immediate period of irradiation without ill effect.⁶ Because brain metastases are often multiple the whole brain should be irradiated even if the brain scan reveals only a single lesion. We currently use a schedule of 3,000 rads to the midplane of the brain delivered in 10 fractions over 2 weeks. This is biologically equivalent to about 4,000 rads given at the rate of 1,000 rads per week.⁷ We administer dexamethasone 4 mg. by mouth twice a day beginning one day prior to the first treatment and discontinue it after the first week, if there is no evidence of cerebral edema. The shorter schedule is effective, well tolerated and has the obvious advantage of taking less patient time.

There is convincing evidence that radiation is effective in controlling brain metastases. Order et al. reported improvement in 60% of a series of 108 patients.⁸ These patients were classified according to intellectual capacity, ability to work, and need for hospitalization. They also found that the patients with the least pre-treatment deficit had the highest rate of improvement,

illustrating the importance of early diagnosis and prompt treatment. In a series of 62 patients receiving brain irradiation for metastatic lung cancer, Montana et al. reported 56% objective neurological improvement.³ Order also compared survival in irradiated patients versus surgically treated patients. Survival was slightly better in those patients treated with brain irradiation indicating that craniotomy is not routinely necessary in patients with brain metastases. The chief side effect of whole brain irradiation is hair loss. Regrowth of hair usually begins after several weeks. The majority of patients tolerate this regime without other side effects.

CONCLUSIONS

Brain metastases are a fairly common problem facing any physician who cares for patients with cancer. Whole brain irradiation can usually relieve the morbidity of brain metastases for the remaining life of most patients. The probability of achieving palliation is increased if the patient can be treated before the development of profound neurological deficits.

ABSTRACT

Brain metastases cause serious disability in many patients with cancer. Whole brain irradiation provides effective palliation in the majority of patients with brain metastases. Palliation is more effective if treatment is begun before major neurological deficits exist. Treatment is well tolerated with hair loss as the only consistent side effect. The diagnosis can usually be established with brain scan. Routine craniotomy is not necessary.

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Obstetrics and Gynecology

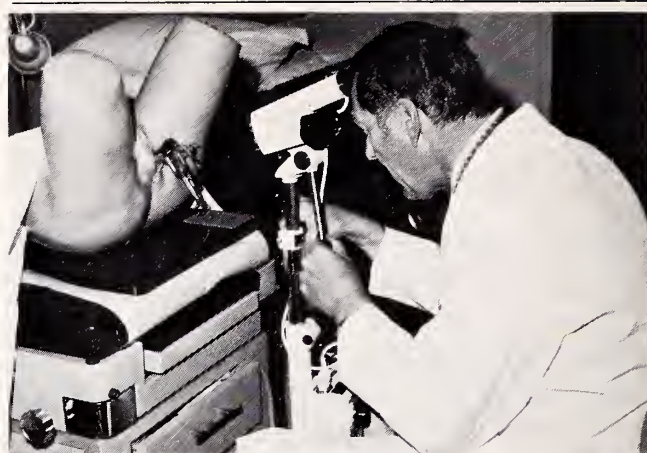
COLPOSCOPY AN OVERVIEW FOR ARIZONA

WILLIAM C. SCOTT, M.D.

The art of intelligent visual interpretation of the surface characteristics of the uterine cervix and vagina has become the latest cause celebre in gynecology. This rapid awakening of interest follows the increasing number of American and Australian reports demonstrating its complementary value with cytology for more accurate and economical as well as individual follow-up of the patient with an abnormal pap smear report.

For over forty years since the pioneer work of Hinselmann, gynecologists throughout the rest of the world have continued to develop better instruments to observe the cervix in order to screen for malignancy. It was that screening approach which unfortunately delayed American interest, for it came at a time when cytology emerged as a more rapid, less expensive method for massive screening. With fifty percent of American women now receiving pap smears and a massive thrust by the American Cancer Society now being mounted to reach the remainder, the present attractiveness of colposcopy lies in the solid correlation of the observed colposcopic findings with histologic confirmation.

The surface changes observed through the binocular microscope depend primarily on the angioarchitecture of the epithelial covering. Histological study with alkaline phosphatase staining of the capillary endothelium corroborates that the earliest gross finding of early dysplasia is seen as an abnormal change in the blood supply. As the cell metabolism increases, so does the caliber of the local blood vessels.



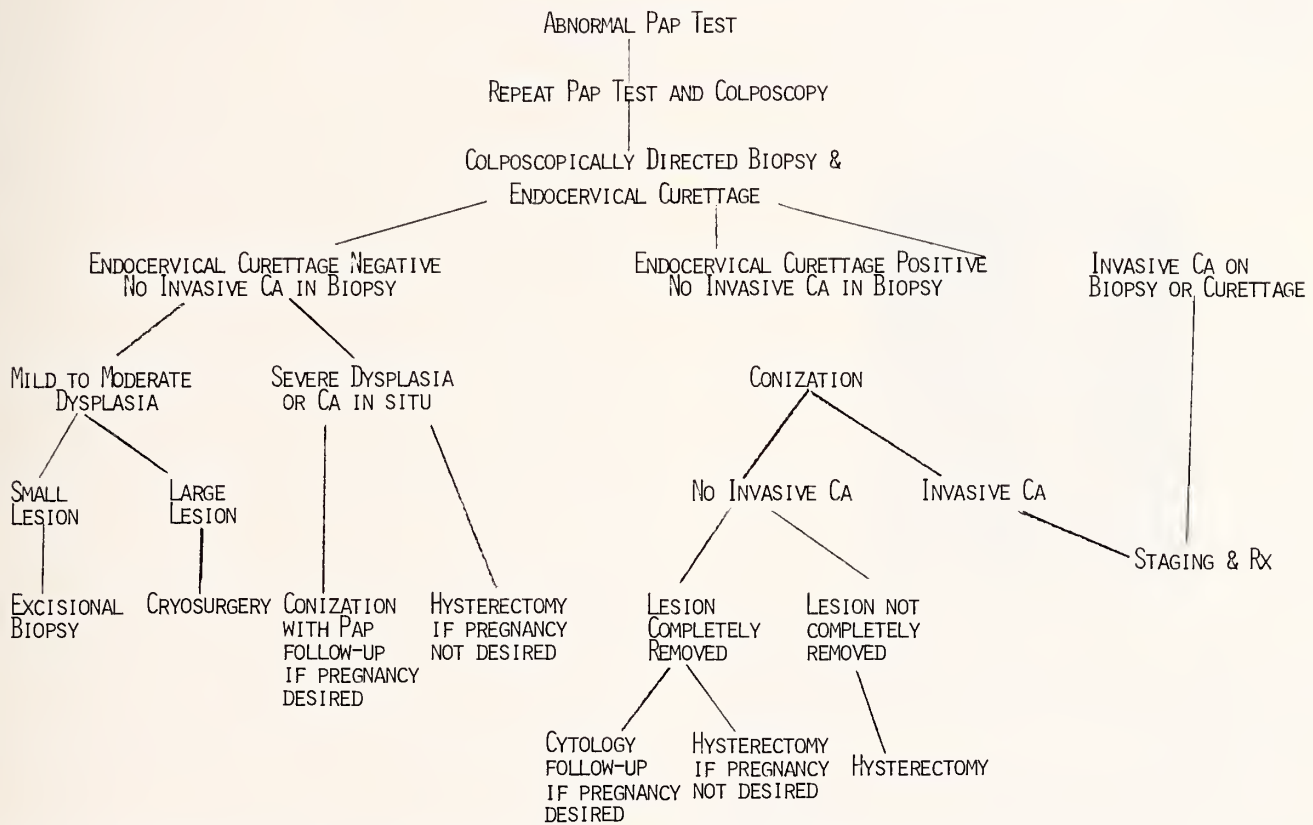
OFFICE USE OF THE COLPOSCOPE

Through the colposcope, sharp bordered changes in color as well as abnormal vascular patterns easily, identify the areas from which the abnormal cells are being desquamated. Painting the cervix with acetic acid and using a green filter in the light pathway markedly accentuate these findings. Pinpoint biopsy of the areas with the most marked change confirms histologically the extent of disease. Colposcopy thus now rests on a firm histological base and ample proof exists of its value to determine the nature of benign disease, identify the cause of abnormal pap smears and localize areas to biopsy.

When no atypical changes are visualized or when the upper border of the lesion disappears from view into the cervical canal, a small sharp curette is inserted into the cervix. The entire cervical canal from the internal on outward is scraped and these cellular fragments separately submitted to the pathologist as an endocervical curettage. This procedure identifies any hidden pathology within the endocervix. When the entire area of dysplastic change can be outlined and the endocervical curettage is negative, the need for a more radical diagnostic procedure is eliminated. Traditionally, random punch biopsy or cold knife conization has been the accepted follow-up for the abnormal smear. The former might well be called "blind" in view of the availability of the colposcopically directed punch biopsy. The latter not only is a more expensive surgical procedure necessitating anesthesia but is accompanied by significant morbidity of hemorrhage, infection, post-operative infertility and even hysterectomy. During colposcopic evaluation of the cervix the actual extent of the lesion is determined. Only in those instances in which the entire lesion is not visible or in which the endocervical curettage is positive for malignant

From: U of A College of Medicine, Tucson, AZ 85724

ABNORMAL CYTOLOGY PROTOCOL



cells is conization indicated. Colposcopy thus avoids unnecessary radical procedures as well as preventing inadequate therapy by more accurate diagnosis.

The accompanying flow chart is suggested as a model for the modern management of the abnormal pap smear. Destruction of the completely visible lesion may be accomplished by heat, cold or by surgical excision. The electrocautery or cryosurgical modality should at this time be reserved for the mild to moderate dysplasias only. Severe dysplasia is indeed a precursor of carcinoma-in-situ and should be managed the same — conization where child bearing is a factor, and hysterectomy where it isn't. Cryosurgery is being evaluated as treatment for the in-situ-lesion but present reports show a significant number of failures. The final results of this research should be awaited before this approach is accepted in the management of severe dysplasia and carcinoma-in-situ. In addition, freezing of the non-colposcopically investigated cervix is to be avoided, for all too easily early malignancy may subsequently be covered superficially by regenerating normal epithelium only to break out as advanced malignancy a few

months later.

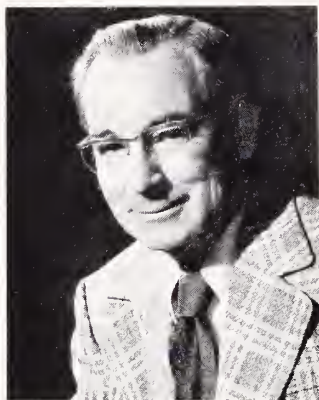
These obvious advantages presented by colposcopy need to be made available to all our patients. This may be accomplished by either of two approaches. The individual gynecologist, by appropriation of sufficient funds for a colposcope and sufficient time for training, may well make this technique available to both his and referred patients. From a pragmatic viewpoint, however, the establishment of regional colposcopy clinics seems to be a more practical approach. Interested practitioners from various areas of the state might well avail themselves of practical experience in dysplasia clinics and take back their expertise to set up a local referral source. Such training and necessary organizational backup is now available in the state and certainly not limited to specialists. Colposcopy can satisfactorily be done under supervision by anyone with a medical background who wishes to dedicate the time and energy.

If for no other reason than to eliminate 80% of present conizations as well as occasional hysterectomy, we owe it to our patients to implement the availability of colposcopic services in Arizona.



Editorial

SANITY



William B. McGrath, M.D.

It is a strict rule of science: to define a term is to tell how to attain it. Definition is destination. We define sanity then by methods of being or becoming sane.

1. The word, sanity, comes from the Latin root which gives us sanitation. To be sane is to be cleansed. Religion has lost sight of the tremendous significance of purification rites and has neglected them. Hence their appeal and wonderful value in the twelve steps of Alcoholics Anonymous. To admit one's wrong, without excuse, and to try to make restitution is to begin to be unburdened of guilt and fear.

In every mental disorder there is a primary element of regression. Psychiatry interprets regressive behavior as representative of primitive or infantile sexuality and aggression. No! The strongest drive of the human mind is to recapture innocence. This is why we regress.

The hand-washings and the phobias of the obsessive-compulsive are an obvious plea for purity. That plea is recognizable in projection and displacement, in denial and undoing, and in all the other misnamed mechanisms of defense. So, too, the hallucinations and delusions of the insane express this ultimate wish, the wish for innocence. A girl relinquished her virginity in a rather sordid affair. While psychotic she said: "I think that my father is God and my mother is the Blessed Virgin, and I am going to have a Christ child by immaculate conception." How condensed but clear her wish!

Adler overlooked this point in his emphasis on the will to power. Wealth or influence or political status can be jeopardized. In innocence there is a power which is unique because it is invulnerable. Remember? "My strength is as the strength of ten because my heart is pure." Or; "The guilty flee when no man pursueth." An innocent person cannot be intimidated; i.e., made timid and therefore deterred or compelled by threats. An innocent person does not have to ingratiate himself to any kind of authority.

2. Sanity is not what one thinks or feels but what one does. Emotions or feelings are of quite questionable reality; they cannot be measured or validated. Psychiatry and religion and law pay much too much attention to reasons and intentions, giving them almost as much weight as an act itself. This is nonsense. If a child is hungry you feed it because it is hungry. What does it matter how you feel toward the child or toward yourself in relationship to the child? You have done the right thing. An act of adultery is an act of adultery. A hundred rationalizations or excuses will not change it to something else. From the scientific viewpoint what goes on in one's mind is mostly irrelevant; it is only the act that counts. Sanity is that which can be observed; namely, sane behavior.

3. Sane behavior calls for a certain simplicity. Neurotic and insane people are said to have complexes; i.e., they malfunction because they are too complicated. A young woman, fully dressed, jumped into the pool. She was showing that she was uninhibited, emancipated. She wanted to disprove the notion that she would be the docile child of domineering parents. She was testing the tolerance of the institution and her therapist. And she wanted the attention and especially the rescue efforts of the male attendants. A sufficient reason for going into the pool would have been to cool off. Appropriate behavior would have been first to put on a bathing suit.

When G. L. M. Mallory was asked why he climbed Mt. Everest, he replied: "because it was there." The response evoked such universal resonance that it became a classic. It is because it epitomized a heretofore unrecognized element of sanity. The most normal person in the world is the mother fixing breakfast because the children are hungry and waiting. The sanest person in the world is the preacher giving his sermon

because the congregation is there. For any given act there must be one necessary and sufficient reason. Anything else is a weed.

Most meditation, as practiced, is quite unhealthy. One does not cut the boat loose from its moorings and let go the rudder. That condition is appropriate to sleep and dreaming. True meditation is to try to focus all of one's faculties on an immediate and bracketed reality. Sensible means that which is being perceived by the five senses. Zen provides an example of healthy meditation when it requires a practitioner to spend an hour trying to find a perfect arrangement for only three flowers. Or a man may aim at the target with his bow and arrow — and simply hold that aim for many minutes. In our vernacular this would be called gathering one's wits, which is a very healthy exercise.

4. Sanity requires flexibility, a freedom of choice in ways of reacting to different situations. Remember the personality disorders, such as the passive-aggressive, the histrionic, the obsessive-compulsive? Incongruously, the sanest individual will have the most of those traits — but he will remember to select which will be appropriate or effective in a given situation. If one recognizes himself on every page of the textbook, he is probably pretty normal. If he sees himself only in one chapter then he may need help.

It is intelligent to remain passive-aggressive until it is expedient to assert one's self. The conscientiousness and punctuality of the obsessive-compulsive are virtues if they can be disengaged from his stubbornness and miserliness. There are sets of circumstances in which one had better be a little paranoid.

The discipline is to overcome the rigidity, to practice reacting in ways opposite to those which are characteristic or those which have become habitual. The development of this flexibility, the rational freedom of choice will bring back the feeling of being in command of one's destiny.

5. Sanity does not take place in a vacuum. Insanity does. The neurotic and the insane are painfully alone, terribly egocentric. The compulsive goes through his private rituals. The exhibitionist is satisfying only himself, at the expense of others. The schizophrenic walks alone, muttering to himself or signalling his imaginary companions.

Morbid behavior often has some resemblance to masturbation. One thinks of the narcotic ad-

dict, doing something to himself to seek pleasure or relieve tension.

When almost all of one's thoughts and feelings are unshared, unexchanged, then they accumulate. They ferment and finally produce an overload in the mind. It is this overload which is betrayed in bored restlessness and then in anxiety or psychosomatic disorder, or which may finally spurt forth in delusions and hallucinations and random, insane behavior.

6. Sanity still requires *corpore sano*. Untouched in this essay are the ultimate determinants of mood and mental functioning, the electrochemistries of the brain. They are infinitely complex and exquisitely delicate. Suffice it to say that nothing ever happens in the chaotic continuum of the environment or in any organ or system of the body without affecting the screening and sorting mechanisms, the inhibiting or stimulating functions of the brain which are still beyond our ken.

Astrology, for example, was originally quite valid. We have only recently had pasteurization and canning and especially refrigeration. Before this the season of a child's birth served a critical role in his physical and mental and temperamental development. What vitamins were plentiful in the diet of the child born in April and lacking in November? We can think of hepato-lenticular degeneration and wonder about the concentrations of copper in nuts and certain cereals and their effect on the liver and brain of our ancestors. Their food supply and therefore their development were largely determined by the seasons, and the seasons were closely correlated with the movement of the constellations. Thirty or a hundred thousand years ago some child or some tribe may have survived because in a certain area at a certain time a mold grew in a moist pile of grain.

The psychiatrist and the general physician must never forget that the smallest variances of certain hormones and enzymes can have devastating effects on the personality. A trace of iodine in the water will prevent myxedema and goiter. A drop or two of diluted hydrochloric acid will prevent the paranoid psychoses of pernicious anemia. Perhaps a soil rich in lithium would have warded off the manias. We must be constantly aware that psychiatry is still descriptive, and what we speak of as causes will in time be shown to be effects.

THE IRON CURTAIN REVISITED



WILLIAM B. HELME, M.D.

Phoenix, Arizona

The little old lady in the babushka was entitled to total and “free” medical care under Hungary’s communist system. Nonetheless, a bit surreptitiously, she handed an envelope to the Budapest physician, who receives a monthly salary from the State to provide that care, but who easily accepted the envelope. Both conspire rather openly to outwit the system because neither likes it.

In Hungary, like every place else, patients don’t enjoy being a number, being herded about, being treated by a nameless person in white, waiting interminably. Physicians don’t enjoy working for less than \$150.00 a month (plumbers get more), providing total care to a large number of patients assigned by the State. And so both parties conspire freely to revive a form of private, fee for service, medical care. The patient who passes the envelope, containing an unknown number of Florin, has received some personal, prompt, careful attention; the physician will augment his income to a reasonable level and his colleagues will condone the practice, provided the envelope passes after the service — which is pretty much the way we do it.

Hungary is the country which, in 1956, rebelled against the Communism which had been imposed by the “liberating” Red Army at the end of World War II. Freedom lasted a few days — until Soviet tanks rolled through the streets of Budapest and we saw young men with rocks for weapons standing against those tanks and heard finally their clandestine radio, in despair, call “this is the voice of freedom — signing off.”

The classless society has not achieved equality and, worst of all, there is no recourse from the inequities which exist. Artists and entertainers enjoy all manner of privileges at present, because they can earn hard currency for the

State, but Medicine is not an honored profession. This is not to say that the people of Budapest trudge about in sadness. They are adaptable and their current leader is rather well liked. But they have no rights beyond those given at the whim of their rulers. The airport is first rate but it is a singularly quiet place because the people of Hungary just aren't free to travel or enjoy many other things we take for granted.

During April and early May my wife and I visited ten countries of western and eastern Europe, plus one in North Africa, and had the opportunity to observe a variety of medical care systems. All have gone farther down the road which, it seems clear, we are about to travel. We can learn from their experiences. In some countries, under national health insurance, the patients get good care and the physicians are happy. In others, both parties are unhappy and our profession has deteriorated. What has been the difference and how do we avoid the attitudes and the actions which have ruined medicine in these countries.

Austria is an example of the road not to follow. Their system is one of the earliest schemes of national health insurance and it is dominated by an overwhelming bureaucracy which has grown with the years. A specialist's consultation fee will just about buy him a haircut and there is no relation between amount of fee and the frequency of service he must provide. Doctors are disheartened by demanding patients who regard them as employees and insist on all manner of studies. They get inferior but expensive medicine. Administrative costs of the system are nearly half the amount paid to physicians each year.

How could this come about in a country with a great medical heritage? The invariable an-

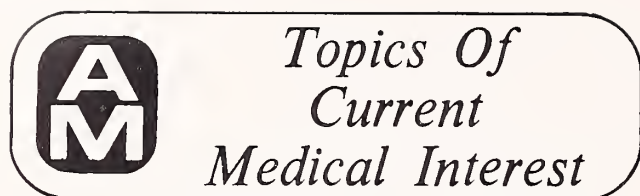
swer one hears is that the doctors remained politically aloof from the program during the formative stages and the bureaucrats moved in.

In other countries, the medical profession acknowledged their deficiencies and helped to shape the national program. The best of these are marked by some retention of fee for service with payment of a part by the patient, adequate representation of doctors on controlling boards, free choice of physician and patient, peer review of quality of care and no bureaucratic intervention in medical matters. In countries retaining these features, the medicine is good, the doctors are happy and our profession continues to be one of integrity and accomplishment. It didn't just happen that way — our colleagues there participated in the planning and guided it from the start, even though they were basically opposed to any intervention by the State.

A few years ago a senior editor of *Medical Economics*, writing on this subject, said "If a plan that doctors dislike is adopted they'll do themselves more harm than good by griping about it in public and refusing to get involved in the administration of it. The wise course is to get into the program and actively work for changes."

I have learned that, during our trip, this viewpoint appears to have been rejected here but I still have to believe that our profession will learn from the mistakes of others. Everyone knows that those who don't are doomed to repeat them.

Let us hope that we won't have to undertake a painful trial of State Medicine and then find our patients, like the little lady in Budapest, resorting to subterfuge to revive a system which works best for patients and which can be substantially preserved even under the National Health Insurance.



PEDIATRIC CONTINUING EDUCATION

SCREENING FOR INBORN ERRORS OF METABOLISM

GRANT MORROW, III, M.D.

Prior to 1932, the physician was able to count the number of inborn errors of metabolism (IEM) on one hand. In the early 1930's, Folling described phenylketonuria for the first time. Since that report, the number of inborn errors of metabolism has exploded in number to the point where McKusick in his compendium now lists nearly 1900 disorders which may be inherited. To expect the general physician to either memorize or want to know the symptoms of a rare disorder such as beta-methylcrotonylglycinuria would be absurd. The important thing is to recognize that the patient may have an IEM. There are certain significant symptoms which begin early in life and may give the clinician a clue that he is dealing with a child suffering from an inborn error of metabolism. Whether it is methylmalonic acidemia or homocystinuria can be determined by someone operating a metabolic laboratory. The following paper deals with who, what, and how we screen infants and children for metabolic disorders.

Who

Table 1 lists certain clinical findings which suggest inborn errors of metabolism. Many times a previous sibling will have died or had symp-

Table 1.
Clinical Phenomena Suggestive of Inborn
Errors of Metabolism

In newborns
Previously affected sibling or a positive family history
Sudden unexpected death
Unexplained seizures
Unusual physical appearance
Sexual ambiguity
Persisting jaundice
Edema
Vomiting and anorexia
Unexplained acidosis, especially if associated with ketosis
In older infants and children
Failure to thrive, failure to grow
Mental retardation, seizures, spasticity, coma
Specific physical abnormalities — dislocated lens, renal stones, deafness, rickets, liver disease, cataracts, renal disease, thrombosis, hematuria, speech defects, osteoporosis

toms which may be interpreted retrospectively as compatible with an inborn error of metabolism. The family who has several children who die sudden unexpected deaths is also in a high risk category. Seizures, unusual physical appearance, persistent jaundice, vomiting or anorexia and unexplained acidosis, especially with ketosis, are all findings which may be noted very early in life. As one becomes older, failure to thrive or failure to grow, mental retardation, seizures, spasticity, coma, as well as specific physical abnormalities should make one suspicious.

Certain prospective screening is done in all newborns in most states at the present time. This, of course, is to rule out phenylketonuria. Hopefully, by screening before symptoms appear, therapy will become more effective and will decrease the detrimental effects of an inborn error of metabolism. Certain problems arise with prospective screening. Individuals who may have a high phenylalanine level for reasons other than PKU may be put on a treatment regi-

men unnecessarily and it will be detrimental to the growing child. Screening programs are preliminary studies and must be followed up with definitive diagnostic procedures to substantiate the diagnosis.

What

By far the easiest way in older people to screen for various disorders is by checking urine specimens for abnormal compounds. In the newborn, urine collections are difficult because of the fact that they are oftentimes contaminated with stool. The strapping of females is difficult. Mass screening programs for PKU require blood tests which is actually simpler to obtain in the neonatal period. Other blood tests which may be helpful for detecting inborn errors of metabolism are the hemoglobin, blood glucose, BUN and electrolytes, calcium, phosphorus, uric acid, thyroid function studies or immunoelectrophoresis. Under certain conditions, stool examination may be helpful for ruling out malabsorption disorders.

How

Even some of the simple tests performed on urine can help rule out certain inborn errors of metabolism. Table 2 lists some of these. The 10% ferric chloride reaction can be quite helpful particularly to the pediatrician. A commercial test called phenistix is available which is a paper

Table 2.	
Urine Tests Helpful in Diagnosing Inborn Errors	
Urinalysis	Diseases (examples)
Protein	Heredity nephropathies
Crystals	Cystinuria
	Orotic aciduria
Reducing substances*	Diabetes, lead poisoning
	Galactosemia, fructosuria,
	pentosuria
Cells	Hereditary hematuria
Specific gravity	Diabetes mellitus
	Diabetes insipidus, pituitary
	Diabetes insipidus, renal
pH	Renal tubular diseases
	Acidosis
10 per cent ferric chloride	See Table 3
*Nonglucose reducing substances other than listed: ascorbic acid, homogentisic acid, lactose, tyrosine and its metabolites.	

strip impregnated with ferric chloride. Table 3 lists some of the various conditions with the color reaction that can be detected by ferric

Table 3.	
Urinary Ferric Chloride Reactions	
Condition	Color Reaction
Phenylketonuria	green
Tyrosinemia	green—fades rapidly
Histidinemia	green
Oasthouse disease	purple-brownish red
Maple-syrup urine disease	gray-green
Alkaptonuria	dark brown
Pyridoxine disorders	dark green-brown
Tumors	black
Acidosis (e.g., diabetes mellitus; organic acid defects)	red-brown
Drugs or poisons	
salicylates	purple
phenothiazines	purple
p-aminosalicylic acid	red-brown
antipyrin	cherry-red
acetophenetidines	cherry-red
Lysol	green
Increase in direct bilirubin (e.g., hepatitis)	green

chloride. When the question of ingestion of either aspirin or some other drug is considered, the physician can oftentimes rule out such a possibility by getting a negative urinary reaction. The ferric chloride test can be done in the office of the private practicing physician since ferric chloride is inexpensive and has a long shelf life. Phenistix can also be used quite easily but must be totally saturated with urine to be interpreted properly. If the physician still has questions regarding preliminary screening, he may order a metabolic profile from a laboratory which is equipped to do more extensive tests. Certain spot tests on urine as well as chromatography will oftentimes be very helpful in the management of the difficult diagnostic problem.

I would like to again emphasize that screening tests, although they are important and necessary step in recognizing the existence of metabolic disorders, must not be relied upon exclusively in making a diagnosis. Confirmatory tests should be performed in a reliable laboratory before treatment is started.

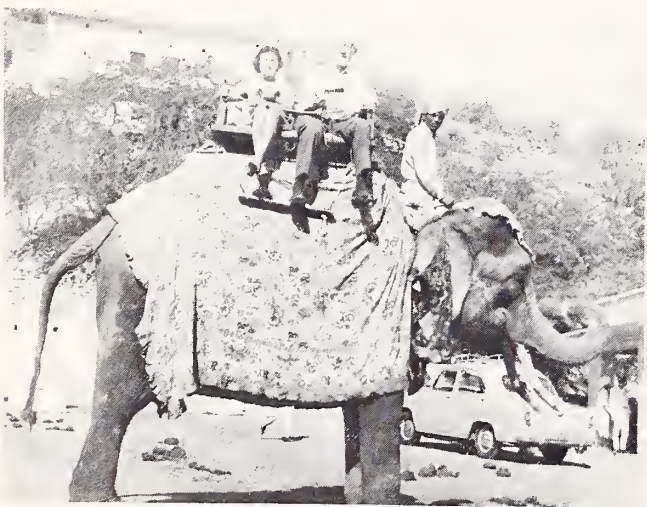


ArMA *Medical History*

ANY HOSPITAL-USA

The Young Dr. Malone

EDITORIAL NOTE: Some months ago this exercise in futurity descended upon us. And it may be that this prognostication of our future dispensation of the Art is apt. J.W.K.



John Doe enters the hospital. He presents his identification card to the admission clerk. She places the indestructible plastic card into the computer and receives an instantaneous printout of the patient's medical history, his immunizations, blood type and blood and tissue cross-match characteristics. His medical history will contain a resume of genetically significant familial diseases, a code signifying the artificial chromosomal manipulation done before the patient's birth and the post partum RNA supplementation to enhance intelligence. There may also be a genetically oriented prognostication of tissue and organ defects which this patient will be subject to. The card also contains a resume of the patient's educational and job experience, but the computer selectivity ignores this information.

The patient is next interviewed by a medical examination technician who takes the pertinent history of the present illness and does a physical examination. The pertinent findings are punched into the computer record for this patient. The technician also places the patient on the "diagnostic table" where a robot arm places a tourniquet on the arm, "senses" the location of the vein and draws blood for an SMA 250, which is done immediately by automation. Standard and special x-ray procedures, as directed by the computer, are done with positioning being done by the robot arms and immediate interpretation by the computer. An EKG and EEG are done with immediate read-out by the computer as well as a microwave of the condition of coronary and cerebral vasculature.

The patient is then taken to his room which is tastefully furnished with colorful disposable drapes, sheets, etc. He is provided with disposable hospital clothing. On the video-intercom there appears a list of a variety of foods on the special diet which has been ordered by the computer. The patient punches in his selections for the next 24 hours. His selections are transmitted to the Food/Storage area (which used to be the kitchen). There a clerk makes up trays of food from the store of irradiated, permanently preserved food. The trays are transported to the ward area where they may be served whenever the patient wishes, after being instantaneously cooked in the ultra-electronic oven on the ward. Routine medications, as ordered by the computer, are also delivered to the ward by conveyor from the Pharmacy.

Meanwhile, the computer has selected the appropriate medical, surgical panel of physicians to consider the patient's illness and arranged for a time and location for the panel's deliberations. In advance of the meeting, each physician is provided a printout of the patient's history, physical findings, lab results and computer interpretations of EKG, EEG and x-rays. The patient has previously also punched out answers to a battery of questions over the video intercom and the resulting computer evaluation of the patient's emotional status is also included in the report to each doctor.

At the appropriate time, the panel meets, agrees upon an interim diagnosis and perhaps orders specific tests. When a final diagnosis is established, this is fed into the computer which immediately prints out the treatment and prognosis.

A copy of the final diagnosis and projected treatment is sent back to the "primary care" physician who originally decided that this patient required hospital care.

Assuming our patient is now well on the road to recovery, let us take a closer look at some of the departments of the hospital.

Obstetrics is a small, compact unit. Due to the strictly controlled birth rate, there are few deliveries and these are done by appointment so the ward is never overcrowded.

The Newborn Nursery is therefore also small, but it also contains facilities for obtaining laboratory samples for chromosome analysis and RNA evaluation. These samples are forwarded to a specialized lab which is not in the hospital.

Pediatrics is small, since there are fewer children resulting from the low birth rate. It contains a few "teaching machines" so the child may continue some of his programmed education courses while in the hospital.

Surgery has undergone considerable change. Since the advent of a cancer immunization program, there is almost no cancer surgery. Organ transplantation and substitution by mechanical devices, and traumatic surgery, makes up most of the schedule. Incision and hemostasis are done quickly by laser and wounds are closed with "tissue gluc" instead of sutures.

The Medical Ward consists mainly of patients being evaluated for organ transplants. The Coronary Care Unit no longer exists, for early defects in coronary circulation are detected promptly and the arterosclerotic plaques are removed chemically. As more advanced heart disease develops, the patient receives a transplant or a mechanical heart.

The Emergency Room is a very busy place, filled with trauma cases. With man's three-day work week, he manages to become involved in a great many accidents during his leisure time.

The Psychiatric Ward is large and overcrowded. Biochemical cure of the psychoses has been accomplished, but the need for short-term hospitalization for acute neuroses is great.

The Laboratory is almost totally automated. Most x-rays are done by robot and routine interpretations are done by a computerized scanner. The old Cobalt machine sits there unused. There are no more cancer patients to treat and the machine was too expensive to junk.

Let us not forget to discharge our patient. As he leaves the hospital, his identification card is returned. It now contains the additional computer symbols for his recent disease.

The diagnosis in this particular case remained obscure until a consultation was obtained with a team of former Internists, Radiologists, Obstetricians, GP's and Pathologists, who determined that the patient was allergic to credit card plastic and anergic to computer tapes. The machines failed to read out the diagnosis because of a "conspiracy of silence" they had self-programmed. The patient subsequently couldn't afford \$1.39 for antihistamines that were prescribed due to financial ruin occasioned by the automated hospitalization, since the diagnosis was not included on the Federally-approved insurance list.



In Memoriam



JOSEPH PHILLIP McNALLY, M.D.
1904-1974

Born in Prescott, Arizona Territory, February 23, 1904.

He received his primary education in Prescott and pre-medical training at the University of Arizona. His medical degree was obtained at St. Louis University School of Medicine in 1929.

His post-graduate education, military service, professional and social affiliations were numerous and honorable.

"Doctor Joe" served Prescott in the practice of medicine for forty years. As his father before him, in that same community, the dedication to his profession was manifested in the respect of his patients and colleagues. He was a master of the art as well as the skill. Such a practitioner will certainly be missed.

It is our personal endeavor to emulate this very special physician — our beloved father.

Joseph B. McNally, M.D.
Gerald F. McNally, M.D.



ArMA Reports

THE MINUTES APPEARING IN THIS SECTION HAVE BEEN EDITED TO CONSERVE SPACE. A COMPLETE COPY OF THE MINUTES OF ANY MEETING WILL BE MAILED TO ANY MEMBER REQUESTING THEM.

MEDICAL EDUCATION COMMITTEE

Meeting of the Medical Education Committee of the Arizona Medical Association, Inc. held at 810 West Bethany Home Road, Phoenix, Arizona on Thursday April 11, 1974, convened at 7:48 p.m., Robert E. T. Stark, M.D., Chairman presiding.

MINUTES

The minutes of meeting held January 31, 1974 were approved as distributed.

BOARD OF DIRECTORS

Reporting of Continuing Medical Education Activities

The Board of Directors during meeting held February 16, 1974 approved the Committee's request to extend the reporting period provided in Resolution 2-71 from June 30, 1974 to September 30, 1974 and annually thereafter. Further that the Committee report to the Grievance Committee those members who fail to submit a satisfactory report of continuing medical education activities on September 30, 1974.

Resolution 7-73

The Board of Directors accepted the Medical Education Committee's recommendation that the proposed \$10 assessment as set forth in Resolution 7-73 was unnecessary at the current time.

Osteopathic Physicians — M.D. Internship

The Board of Directors referred to the Medical Education Committee a copy of a letter by Richard W. Abbuhl, M.D., regarding the Arizona Board of Osteopathic Examiners in Medicine and Surgery, et al vs Gary Wayne Ferris, D.O. for review and if appropriate for recommendation.

It was moved and carried to recommend to the Board of Directors that the Arizona Medical Association not become involved until such time as all legal remedies are exhausted.

ARIZONA REGIONAL MEDICAL PROGRAM C.E.S.A. PROGRAM

Drs. John T. Condon and Oscar Thoeny were invited by the Chairman to present proposed solutions for con-

tinuance of the ARMP-CESA program.

Beginning last October the ARMP-CESA program invited selected persons to be members of an ad hoc committee for developing one or more possible solutions for the funding of the CESA program that has been sponsored by ARMP these past two years in anticipation of the time when RMP funding would no longer be available to support the CESA project.

As a result of their deliberations and the fact that CESA as now constituted will not be funded by RMP after June 30, 1974 the ad hoc committee has developed two proposed solutions for the continuance of its outreach program for continuing medical education for health professionals in the state of Arizona. Because of the important role that the Arizona Medical Association plays in requiring 150 continuing education hours of its membership, one of the solutions enclosed provides an opportunity for greater involvement by ArMA. The CESA staff has been directed by Dr. Melick, based upon the recommendation of the Resources Task Group, to present these solutions to the appropriate people within the local community, as well as to the selected state health professional organizations.

PROPOSED SOLUTION #1

Primary Authority: University of Arizona (Regents)

Governing Body: Vice President of Health Sciences

Administrative Body: CESA staff

Operational Procedures: Current CESA structure and services recognizing that the full potential of each have not been fully or completely implemented.

Financial Inputs and Responsibilities:

University of Arizona, Office of the Vice President for Health Sciences: Responsible for housing CESA staff; support the needed office supplies, equipment, and services; support the office of the director of the CESA Project 18%

Contracts for continuing medical education services with local, state and national professional organizations, volunteer organizations, and state and federal governmental agencies departments 39%

Local community funding 43%

PROPOSED SOLUTION #2

Primary Authority: Arizona Medical Association Foundation, Inc.

Governing Body: **Permanent Members**

Arizona State Medical Society

Arizona State Nurses' Association

Arizona State Hospital Association

Arizona State Dental Association

Arizona State Pharmacists Association

Rotating Members

Four members selected for rotating terms of two years from recognized health professional and voluntary health organizations in Arizona.

Administrative Body: CESA staff

Operational Procedures: Current CESA structure and services recognizing that the full potential of each have not been fully or completely implemented.

Financial Inputs and Responsibilities:

Primary Authority: Arizona Medical Foundation (includes contracts for continuing education services with foundations, industries, state uni-

versities, community colleges, local, state, and federal governmental agencies and departments) 25%

Governing body members and eligible rotating member organizations 50%

Local community funding 25%

After the presentation the Committee was informed that the proposed solutions had been discussed with Dr. DuVal on this date and would be discussed with the new Dean, Dr. Neal Vanselow, in the near future. Further, it was reported that the Board of Regents had authorized the take-over of the CESA program whenever the occasion arises; however, the program must be self sustaining. Considerable discussion ensued.

It was moved and carried that the Medical Education Committee not make recommendations on the continuance of the ARMP-CESA program pending further consultation with the new dean, College of Medicine.

SECTION ON GRADUATE MEDICAL EDUCATION

Dr. Layton reported that the Section on Graduate Medical Education met this afternoon to consider the report on Resolution 9-73. As the Section began to address the resolution it became apparent very quickly that in this age of major social change concomitant alterations occurring in the organization of medical education and practice would have a direct bearing on the implementation of the resolution.

First, the concept of the continuum of medical education from entrance into medical school throughout a physician's career is evolving. This concept will change the contour of medical education and will challenge medical schools and teaching hospitals with new responsibilities. Also, it will necessitate that national agencies involved in the accreditation of medical education and the evaluation of professional competence adapt to the newly defined needs of institutions and physicians.

Second, future developments in graduate medical education will depend upon whether or not the concept of "institutional responsibility" so clearly enunciated by the Association of American Medical Colleges (AAMC) in its position statements of 1971 and 1973 is accepted. The effects of this change will alter the educational environment of schools of medicine and teaching hospitals, and will have extensive implications for accrediting and evaluating agencies.

Third, the phenomenon of Foreign Medical Graduates (FMG's) and their integration into the United States systems of medical education and service has posed complications for the educational system. In a little over a decade the number of FMG's in the United States has increased four times more rapidly than has the total physician supply. FMG's are approaching 20 percent of all physicians, and one-third of all hospital and residency training posts are filled by them. In 1972 more graduates of foreign medical schools entered the United States than physicians were graduated by our own schools, and 46 percent of all newly licensed physicians in that year were FMG's.

Since undergraduate and graduate medical education are considered integral parts of an educational continuum, it has been recommended that the number of first years positions in approved programs of graduate medical education be adjusted, gradually, so as to ex-

ceed only slightly the expected number of graduates from domestic medical schools but provide sufficient opportunities to highly qualified FMG's. This will have an effect upon the number of positions available for graduate medical education since many of the residency programs deemed to be of poor quality are being terminated.

Fourth, not only it is probable that the number of graduate training positions will be fewer, but also it is probable that an attempt will be made to allocate the potential number of training positions according to medical specialties, including family practice. Questions have been raised in a number of quarters whether we are training too few or too many specialists in various fields to meet society's needs.

Fifth, there is considerable activity among several groups to control the accreditation procedures for graduate medical education. At the present time a coalescence of accreditation procedures by the Association of American Medical Colleges, American Board of Medical Specialties, American Hospital Association, American Medical Association, and Council of Medical Specialty Societies, with the establishment of a Coordinating Council on Medical Education, a Liaison Committee on Medical Education, and a Liaison Committee on Graduate Medical Education providing an opportunity for the integrated accreditation of institutions accepting responsibility for the educational continuum seems most viable.

The implementation of institutional responsibility for the educational continuum and the coalescence of accreditation procedures will have major implications for graduate medical education.

The Section on Graduate Medical Education is of the opinion that a considerable amount of very useful background information has been obtained during this year's study on graduate medical education. With this information available, and with the decisions likely to be made at the national level in the arena of graduate medical education during this next year, the Section recommends to the Medical Education Committee that the evaluation be continued another year with a report to the House of Delegates at the 1975 annual meeting.

It was moved and carried to accept the report of the Section on Graduate Medical Education on Resolution 9-73 and recommend to the House of Delegates that the Medical Education Committee be permitted to continue its study for another year and report to the House of Delegates during its 1975 annual session.

SECTION ON REQUIREMENTS

Dr. Wagner reported that the Section on Requirements had convened a meeting immediately prior to this meeting to consider specific requests for approval of programs and to consider guidelines for 1975 applications in continuing medical education. The meeting will reconvene immediately following adjournment of the Medical Education Committee meeting. Received for Information.

Meeting adjourned 9:28 p.m.

Edward Sattenspiel, M.D.
Secretary

EXECUTIVE COMMITTEE

The meeting of the Executive Committee of the Arizona Medical Association, Inc., held in the Lanai Room of the Safari Hotel, 4611 N. Scottsdale Road, Scottsdale, Arizona, on Tuesday, April 23, 1974, a quorum being present, convened at 7:21 a.m., Philip E. Dew, M.D., President and Chairman, presiding.

MINUTES

The minutes of the meeting held February 15, 1974, were approved as distributed.

STAFFING SECTIONS & SUB-COMMITTEES

Dr. Dew reviewed the past policy of providing staff services at various committee meetings. It was pointed out that there are currently nineteen standing committees, two ad hoc committees, twenty-two sections of committees, and one sub-committee of a section.

Dr. Dew pointed out that Mr. Robinson and Mr. Barnett currently staff all standing and ad hoc committees, as well as provide services to newly started sections, but do not provide regular staffing for meetings of sections and sub-committees. This current policy, along with their other duties, results in an average work week of between fifty-two and sixty hours for Mr. Robinson and Mr. Barnett.

To provide staff services at section and sub-committee meetings, as requested, would require the addition of another Associate Executive Director and secretarial support.

It was moved and carried to continue the present policy of not providing staff support at meetings of sections or sub-committees until such time as additional financial arrangements can be made.

TRAVELERS

Mr. Robinson reported that the Travelers representatives requested a meeting during the annual meeting with the Executive Committee. It was determined to meet with them on Wednesday at 4:00 p.m.

TITLE XIX POSITION REAFFIRMATION

For a wide variety of reasons it was agreed to suggest to the Board of Directors that they introduce a resolution into the House of Delegates reaffirming this Association's support of enactment of a Title XIX program in Arizona.

NHI TASK FORCE

The AMA's request that we designate a small (five or six-man) task force for the purpose of serving as a NHI task force was reviewed.

It was moved and carried to designate our delegates and alternate delegates to this job.

BOARD OF DIRECTORS AGENDA

The committee reviewed the agenda for the forthcoming Board of Directors meeting and prepared various recommendations.

Meeting adjourned 8:45 a.m.

Edward Sattenspiel, M.D.
Secretary

BOARD OF DIRECTORS

The meeting of the Board of Directors of the Arizona Medical Association, Inc., held in the Embassy Room of the Safari Hotel, 4611 N. Scottsdale Road, Scottsdale, Arizona, Tuesday, April 23, 1974, a quorum being present, convened at 9:08 a.m., Philip E. Dew, M.D., President and Chairman, presiding.

WELCOME

Dr. Dew extended welcome to the county society presidents, various other guests and to Malcolm C. Todd, M.D., President-Elect of the American Medical Association.

MINUTES

The minutes of the meeting held February 16, 1974 were approved as distributed.

THE TRAVELERS INSURANCE COMPANIES

Dr. Teahan reported on the growing number of cases being reported and reviewed.

CASES REVIEWED — 1972 — ARIZONA

GP	12	G.S. - 2
		P.S. - 1
GP - AB	1	N.S. - 1
		OB - 1
AB	9	U - 1
		Ped. - 1
Others	4	Path - 1
		Opth - 1
Total	26	

CASES REVIEWED — 1973 — ARIZONA

GP	26	(1 seen previously)
GP - AB	3	
		ORS 7
AB	28	OB 6
		GS 5
		OTO 3
		TS 2
		5 Others IM
		Ped.
		AN
		Path
		Ped. 3
Others	12	Opth 2
		GS 2
		GS-Path 1
		ORS 1
		OTO 1
		IM-OB 1
		PUD-IM 1
		12
Total	69	

D/A = Date of accident

D/R = Date case reviewed

N/R = No medical review

CASES SETTLED — 1972

Specialty	D/A	D/R	\$	Remarks
GP	10/69	9/72	\$51,000	Excessive Cortisone Therapy
AB AN	5/69	7/69	25,000	Burn in Operating Room

GP	8/71	5/72	12,000	Fracture Case
GP	9/71	2/72	25,000	Abdominal Case

BOARD M.D.'s — CASES SETTLED — 1973

AB	D/A	D/R	\$	Remarks
Path	8/71	11/72-10/73	\$80,000	Trichinosis
NS	11/67	10/71	0	Ant. Disc
NS	11/67	5/71	22,500	Ulnar Nerve
NS	2/70	N/R	0	—
NS	7/73	N/R	0	—
GS	12/71	5/73	0	Vein stripping — case dropped
GS	1/73	6/73	0	Pyloroplasty
GS	6/71	10/73	0	Error in report
Ped	8/72	2/73	0	Child with URI—failure to admit
OTO	5/72	6/73	0	Improper diagnosis
OTO	1/72	3/73	0	Tecth broken in OR — not true
OBG	12/72	4/73	0	Laparoscopy — ? informed consent
OBG	12/71	3/73	2,000	Tear at delivery — R-V fistula
OBG	9/72	3/73	0	Improper OB care
OBG	3/72	7/73	2,500	Failure to instruct re: IUD
ORS	12/72	3/73	10,000	ASA given — allergy — G.I. hem.
ORS	8/71	6/73	1,000	Treatment of fracture
U	4/71	N/R	0	—

Family Practice — Cases Settled — 1973

Specialty	D/A	D/R	\$	Remarks
GP	10/71	2/73	\$ 1,000	Patient fainted in office
GP	9/71	6/72	20,000	Drug death — careless prescriptions
GP	11/72	2/73	1,500	Complication from D & C
FP-AB	11/72	2/73	1,500	Obesity treatment
FP-AB	12/71	5/73	0	Erroneous diagnosis
FP-AB	1/72	6/73	0	Erroneous diagnosis
GP	6/72	5/73	0	Failure to diagnose Meningitis
GP	3/72	N/R	0	—
GP	12/72	6/73	0	Poor treatment of Phlebitis — no harm
GP	7/72	6/73	0	Inadequate treatment of Radial fracture

GP	5/72	7/72-10/73	0	Unnecessary surgery
GP	3/73	9/73	0	Sub. Cl. venipuncture
GP	1/73	5/73	0	Adequate office care
Others with Partial Training in a Specialty				
R	2/72	10/72	\$ 1,000	Failure to diagnose fracture
PDC	6/73	8/73	0	Fall in M.D.'s office
OPH	1/73	7/73	0	Failure to diagnose Retinitis

It was pointed out that plans were being developed in cooperation with the Arizona Medical Association to provide individual case evaluation as well as application screening in an attempt to reduce the number of incidents in the program.

Dr. Teahan also pointed out that the New Mexico program, which was started soon after the Arizona Medical Association program, had received a 15 percent decrease in premiums since inception of the program. Additional programs will be worked out with the appropriate committee in order to cut down on the losses, hopefully to forestall a rate increase in the near future.

MALCOLM C. TODD, M.D.

Dr. Todd addressed the Board of Directors on the current activities of the American Medical Association as they related to National Health Insurance, P.S.R.O., Keogh legislation and other items of interest. It was pointed out that Dr. Todd would be addressing the House of Delegates this afternoon.

ArMPAC

Dr. Langston reported that ArMPAC membership continues to grow, but that there is a growing need for members, especially sustaining members who pay \$100 per year.

He reviewed the agenda for the ArMPAC annual banquet scheduled for 8 p.m. on Thursday, April 25. He urged all Board members to attend.

Dr. Langston concluded by giving a brief run down on the various congressional races and state legislature races coming up this Fall.

BOARD OF DIRECTORS

Request to be Amicus Curiae — Elaine Pollack
letter April 3, 1974

Elaine Pollack's letter requesting that the Arizona Medical Association be Amicus Curiae in her complaint No. 147866 — Musick, et al vs Arizona Board of Regents, et al was discussed.

It was moved and carried to table this matter until legal counsel has had an opportunity to review the matter and make his recommendation to the Board of Directors.

Unfounded Malpractice Suits

Dr. George W. Nash's letter of March 12, 1974 was reviewed by the Board of Directors with additional information provided by Dr. Nash as to his reasons for retiring from the practice of medicine as a result of having two unfounded law suits filed against him.

It was moved and carried to refer this matter to the Ad Hoc Arizona Medical Association/Bar Association Committee for their consideration and recommendation to the Board of Directors.

Arizona Health Speakers Information Services Request for Space in the Association Offices

The request that we provide office space to the subject organization was discussed.

It was moved and carried to receive this for information and to bring it up at the next meeting of the Board of Directors with more information as to who sets it up, who sponsors it, its goals, etc. Also MacDonald Wood, one of the signers of the letter of request, is to be asked to attend the next Board of Directors meetings to explain more about the group.

Borrowing Agreement — 1974

It was moved and carried to approve a line of credit with the Valley National Bank in the amount of \$97,000 to be drawn upon as needed during 1974.

It was noted that while our line of credit for the past years has been at \$97,000 we have actually borrowed as follows: 1973 — \$72,000; 1972 — \$72,000; 1971 — \$80,000; 1970 — \$74,000.

Advisory Committee to the Director of the Department of Health Services

As directed by the Board of Directors at their last meeting the Executive Committee recommended appointment of the following members to the subject committee.

Richard S. Armstrong, M.D.
David L. Harris, M.D.
Raymond J. Jennett, M.D.
Henry P. Limbacher, M.D.
Edward Sattenspiel, M.D.
Seymour I. Shapiro, M.D.
MacDonald Wood, M.D.

Mr. Robinson pointed out that the Governor has not announced his choices as of this date.

1974-75 Suggested Meeting Schedule

This matter was referred to the Board of Directors meeting scheduled for April 27, 1974.

BOMEX Lease Renewal

It was moved and carried to approve the July 1, 1974 to June 30, 1975 lease with one-year option (July 1, 1975 to June 30, 1976) at \$6,599 per year (\$550 per month — \$5.50 per square foot) as a minimum. Efforts are to be made to negotiate an increase to \$6 per square foot. Executive Committee is vested with authority to approve such changes.

Nominees for Appointment to BOMEX

It was determined to refer this matter to the Board of Directors at their meeting on April 27, 1974.

Reaffirmation of Support of Title XIX, Medicaid

It was moved and carried to introduce the following resolution into the House of Delegates at their first meeting this afternoon.

"WHEREAS, the Arizona Medical Association has sponsored a Statewide Medical Assistance Program under Title XIX (Medicaid) for Arizona citizens since its enactment by the Congress of the United States; and

WHEREAS, the Arizona Legislature has failed to enact a Statewide Medical Assistance Program under Title XIX (Medicaid) for Arizona to this date; and

WHEREAS, The Arizona Legislature is again seriously considering a Statewide Medical Assistance Program under Title XIX (Medicaid) for Arizona; therefore be it

RESOLVED, that the Arizona Medical Association reaffirms its support for a Statewide Medical Assistance Program under Title XIX (Medicaid) and actively encourages the Arizona Legislature to enact a Statewide Medical Assistance Program during this current Legislative session."

Richard B. Johns, M.D. Resignation

It was moved and carried to accept Dr. Johns' resignation with deep regret. A letter of thanks to be sent to Dr. Johns expressing the sincere appreciation for his great input to the deliberations of the Board over the years.

Membership Classifications Changes Approved

- (1) Cochise County
 - (a) James S. Walsh, M.D. — Active to Active Over 70 — Effective 1/1/74 — Account age — Dues exempt
- (2) Coconino County
 - (a) Martin C. Flohr, M.D. — Active to Active Over 70 — Effective 1/1/74 — Account age — Dues exempt
- (3) Maricopa County
 - (a) Lorenz Anderman, M. D. — Active to Active Over 70 — Effective 1/1/74 — Account age — Dues exempt
 - (b) E. G. Barnet, M.D. — Active to Active Over 70 — Effective 1/1/74 — Account age — Dues exempt
 - (c) Robert L. Beal, M.D. — Active to Associate — Effective 1/1/74 — Account retirement — dues exempt
 - (d) John F. Christianson, M.D. — Active to Associate — Effective 1/1/74 — Account illness — Dues exempt
 - (e) Gordon Gilbert, M.D. — Active to Associate — Effective 1/1/74 — Account retirement — Dues exempt
 - (f) Kenneth A. Herbst, M.D. — Active to Associate — Effective 1/1/74 — Account retirement — Dues exempt
 - (g) Carl T. Kirchmaier, M.D. — Active to Active Over 70 — Effective 1/1/74 — Account age — Dues exempt
 - (h) Edward J. Lefeber, Jr., M.D. — Active to Service — Effective 1/1/74 — Account employment at V.A. — Dues one quarter regular dues
 - (i) Martin L. List, M.D. — Active to Associate — Effective 1/1/74 — Account illness — Dues exempt
 - (j) Joseph F. Mallach, M.D. — Active to Active Over 70 — Effective 1/1/74 — Account age — Dues exempt
 - (k) William L. Mermis, M.D. — Active to Associate — Effective 1/1/74 — Account illness — Dues exempt
 - (l) Herbert Potthoff, M.D. — Active to Associate — Effective 1/1/74 — Account retirement — Dues exempt
 - (m) Walter S. Priest, M.D. — Active Over 70 — Effective 1/1/74 — Account age — Dues exempt
 - (n) Edward Roth, M.D. — Request for continued dues exemption for 1974 — Effective 1/1/74 — Account financial hardship
 - (o) Woodrow W. Scott, M.D. — Active to Associate

— Effective 1/1/74 — Account retirement — Dues exempt

- (4) Pima County
 - (a) Elizabeth Grimm, M.D. — Active to Associate — Effective 1/1/74 — Account retirement — Dues exempt
 - (b) Frank Lo Presto, M.D. — Active to Active Over 70 — Effective 1/1/74 — Account age — Dues exempt
 - (c) A. Harry Neffson, M.D. — Active to Active Over 70 — Effective 1/1/74 — Account age — Dues exempt
 - (d) James D. Van Antwerp, M.D. — Active to Associate — Effective 1/1/74 — Account residency — 1/10 active dues
- (5) Yavapai County
 - (a) Edward V. Putnam, M.D. — Active to Associate — Effective 1/1/74 — Account retirement — Dues exempt
 - (b) Clarence E. Yount, M.D. — Active to Associate — Effective 1/1/74 — Account retirement — Dues exempt
 - (c) Florence B. Yount, M.D. — Active to Associate — Effective 1/1/74 — Account retirement — Dues exempt

AD HOC COMMITTEE ON MATERNAL AND CHILD CARE Crippled Childrens Services

The news release and letter from Boyd R. Burkhardt, M.D. and Paul L. Schnur, M.D. advising the Association that they had filed suit against the Arizona Crippled Childrens Services was discussed. Received.

FINANCE COMMITTEE

Financial Statement for Period Ending March 31, 1974

Dr. Dexter, Treasurer, reviewed the subject statement for the Board.

It was moved and carried to accept the report as presented.

Committee Budget Approvals

It was moved and carried to approve a 1974 budget in the amount of \$300 for the Ad Hoc Committee on Intern and Resident Membership and \$2,000 for the Ad Hoc Committee on Maternal and Child Care.

GOVERNMENTAL SERVICES COMMITTEE

H.M.O. Demonstration Project

The activities of a group of people and organizations who are interested in preparing a grant application to develop a unified approach for the investigation of the feasibility, planning, development and expansion of qualified HMO's in under-served areas of rural and urban Arizona was discussed at great length.

Mr. Ron Krause, Executive Director of the Arizona Hospital Association, reported that the Board of Directors of the Arizona Hospital Education and Research Foundation, Inc. had taken the following action on April 19, 1974.

"To authorize the secretary to appear representing the Foundation at the April 17 meeting of parties interested in HMO feasibility and planning and at such other subsequent meetings as determined necessary to explain the tentative availability of the Arizona Hospital Education and Research Foundation as a possible umbrella agency for the

reception of 93-222 feasibility and planning funds; further,

To indicate this Board's recognition of the need for a more broadly representative body to supervise umbrella activities; further,

To indicate this Board's dissatisfaction with the lack of time to intelligently consider those matters and their strong desire to be more fully aware of pertinent rules, regulations, requirements, and conditions pertinent to this potential activity prior to a final commitment; further,

To express this Board's belief that this Foundation, if it ultimately decides to assume umbrella agency responsibilities and if the other interested parties concerned find the Foundation of interest for that purpose, that the Foundation not engage in any way in the delivery of health care but rather seek other corporate mechanisms if and as the need for delivery approaches."

Many aspects of this proposed program were discussed extensively culminating in the following actions.

It was moved and carried that the Arizona Medical Association not participate officially as a sponsoring organization for a federally funded feasibility study of the establishment of H.M.O.'s in Arizona.

It was moved and carried that, if asked, the President of the Arizona Medical Association appoint appropriate persons to serve as liaison with the Arizona Hospital Education and Research Foundation, Inc. during the tenure of the H.M.O. study.

GRIEVANCE COMMITTEE

Daniel A. Vogel Case

It was moved and carried to approve the recommendation of the Grievance Committee with minor clarifying language changes which are included in the following statement.

"That good medical care does not customarily require two physicians to assist for a vaginal hysterectomy and, therefore, it is recommended that: the civilian health and medical program of the uniformed services not be responsible for the services charged by the second of the two physicians who assisted in behalf of Jeanne R. Vogel on June 28, 1973."

In considering this matter the Board of Directors further recommends that:

A surgeon may find, on occasion, patient conditions where a second physician to assist is necessary for the proper performance of a vaginal hysterectomy. If a surgeon feels two physician assistants are required, the patient should be informed that third-party payors do not customarily allow charges by a second physician assistant, and that he may be responsible for such a charge.

If a surgeon undertakes an elective case whose circumstance requires, in his professional judgement, two physicians to assist, the patient should be informed and advance approval for payment of the additional physician should be sought from the third-party payor; however, the final obligation for the payment of the additional physician assisting, rests with the patient.

MEDICAL ECONOMICS COMMITTEE

Financial Seminars Survey

Mr. Robinson reported that the recent survey of the general membership on the interest in our sponsoring a series of financial seminars resulted in only four positive responses.

Based on this lack of interest no plans for such seminars are to be arranged.

OCCUPATIONAL HEALTH COMMITTEE

Acupuncture Statement

It was moved and carried to adopt the statement of BOMEX on Acupuncture as the official position of this Association. That statement reads:

"The Arizona Board of Medical Examiners has concluded that acupuncture is a therapeutic modality in the practice of medicine as defined by the Arizona Revised Statutes.

Any physician licensed by the Board and prescribing acupuncture shall submit quarterly reports consisting of the diagnosis, treatment and patient response to the Board of Medical Examiners or to a committee designated by the Board. The usual and legal confidentiality of patient medical records shall be maintained.

Non-physician acupuncturists may be registered as physicians' assistants provided they meet established qualifications and requirements for registration."

ICA Statement Regarding Acupuncture

The Board determined that as far as the ICA is concerned, they did not want to change their position on acupuncture adopted on February 16, 1974.

PROFESSIONAL COMMITTEE

"Forum on Learning Disabilities"

The Board reviewed the results of our letters (March 22, 1974) and news releases regarding the subject matter. Received for information.

OTHER BUSINESS

Woman's Auxiliary Letter April 2, 1974

The Board reviewed Mrs. Raymond Vaaler's report on planned activities of the Woman's Auxiliary to the Arizona Medical Association as follows.

"As incoming president of the Woman's Auxiliary to the Arizona State Medical Association I wish to again express my thanks on behalf of the board for your generous grant of \$1000.00. Our aims are to work with our physician husbands to improve the health of the community and this grant enables us to carry out many medically oriented programs.

During the past year we have concentrated our attention on nutrition and legislation. These programs we will continue and we hope to supplement the smaller counties by supplying them with needed materials. The Maricopa County "Muppet Show" for grade school children has been singularly successful and we plan on duplicating this program in all the counties. With our large membership we should also be able to effectively work in the legislative field and we hope you will call on us for any assistance. We plan to set up some positive programs in helping the elderly of our communities. The national auxiliary has an excellent format for this type of project. Mohave County Auxiliary was organized during the past year and we will continue to aid and give this county every assistance.

We are going to investigate the possibility of sponsoring (sic) a program on the educational television station. There are a great many excellent films available and this would be an opportunity to make the public aware of our interest and concern in the health fields. It would also project a positive image. If found to be feasible this matter will be discussed with the Association for their approval. I will be an official delegate to the AMA meeting in Chicago in June and will attend the Fall Conference in the same city. During the year I plan to visit all the counties, accompanied by the president elect, and assist them in planning their programs. Our State Workshop in November will be a concentration of program ideas and "how to" modeled after the Regional Workshop in San Francisco.

The use of the ArMA building greatly facilitates our work and we are indebted to the entire staff for their generous assistance. We sincerely thank you for this thoughtfulness.

Our common interest concerns itself with better health for all and we wish to demonstrate this concern and make a contribution as the Woman's Auxiliary to the Arizona Medical Association."

Received.

Recommendations for Membership on American Medical Association Councils and Committees

It was moved and carried to recommend Louis C. Kossuth, M.D. for membership on the American Medical Association's Council on Environmental, Occupational and Public Health.

Legislative Status Report

Mr. Barnett distributed an up-to-date status report on all legislative items in which the Association has interest.

Meeting adjourned 11:59 a.m.

Edward Sattenspiel, M.D.
Secretary

SCIENTIFIC ASSEMBLY COMMITTEE

The meeting of the Scientific Assembly Committee of the Arizona Medical Association, Inc., held Saturday, June 1, 1974, in C-M, Braniff Place Hotel, Tucson, Arizona, convened at 1:32 p.m., Donald Ziehm, M.D., Chairman, presiding.

MINUTES

The minutes of the meeting held December 15, 1973, were approved as distributed.

ELECTION OF VICE-CHAIRMAN

By unanimous vote Milton S. Dworin, M.D., was elected vice-chairman of the committee, with the understanding that he would be the chairman for the 1976 meeting.

1974 MEETING CRITIQUE

Vincent A. Fulginiti, M.D., letter 4/29/74 &
Suresh C. Anand, M.D., letter 5/13/74

The subject letters and other comments about the 1974 meeting were discussed, with Dr. Anand's letter being held over to the next meeting.

Attendance Report - 1974

Mr. Robinson reviewed the attendance report as shown below, pointing out that another record of physi-

cian attendance was attained - 824, the previous record being 807.

1974 ANNUAL MEETING ATTENDANCE REPORT

County	County Membership	No. of Members Registered	% of Members Registered
APACHE	9	3	33.3%
COCHISE	36	10	27.8%
COCONINO	47	14	29.8%
GILA	12	6	50.0%
GRAHAM	8	1	12.5%
GREENLEE	7	0	-0-
MARICOPA	1367	474	33.9%
MOHAVE	19	6	31.6%
NAVAJO	10	1	10.0%
PIMA	586	102	17.4%
PINAL	38	13	34.2%
SANTA CRUZ	9	5	55.6%
YAVAPAI	38	14	36.8%
YUMA	46	11	23.9%

TOTAL MEMBERS	2232	660	29.6%
Non-Member M.D.'s*		153	
Doctors of Osteopathy		11	
Total Physician Registration	..	824	
Non-Physician Registration**	..	489	
Total Registration		1313	

***Breakdown of Non-Member M.D.**

Intern & Resident	25
Guest Speaker	40
Out-of-State	45
In-State, In Practice	29
In-State, Retired	14
Total Non-Member M.D.	153

****Breakdown of Non-Physician Registration**

Exhibitors	214
Woman's Auxiliary	275
Medical Students	-0-
Total Non-Physician	489

States & Territories Represented in "Out of State" Group

Alabama	1	New York	3
California	5	North Carolina	1
Florida	1	North Dakota	2
Guam	1	Ohio	1
Indiana	1	Oregon	1
Iowa	2	Pennsylvania	2
Illinois	4	Texas	1
Michigan	1	Utah	1
Minnesota	6	Virginia	1
Nebraska	2	Washington	2
New Mexico	4	Wisconsin	2
TOTAL			45

Public Relations Report

Mr. Robinson reported on the Public Relations program for the annual meeting, summarizing as follows:

"The overall commercial value of the time and space - confirmed to date - provided by the news media is:

Television	\$46,215.00
Radio	10,465.00
Newspapers	7,895.00
Magazines	-
TOTAL	\$64,575.00

The \$64,575.00 figure compares with an exposure dollar value of \$59,504.00 gained as a result of the 1973 annual meeting. The slight gain was realized despite a substantial reduction in newspaper lineage this year, which was unquestionably the result of two factors: (1) the increased price and scarcity of newsprint, which has yielded less available newspaper space; and (2) the comparative lack of topics of 'general public interest' explored during the scientific sessions, compared with discussion topics presented in previous years. Outgrowths of the more technical topics from this year's annual meeting, however, should be seen in future months as reporters find opportunities to utilize the background information they have already absorbed."

Commercial & Scientific Exhibits — policy

Considerable discussion ensued on the problem of exhibits that were other than scientific or commercial in nature.

It was moved and carried to recommend to the Board of Directors that exhibits at future annual meetings be limited to commercial or scientific exhibitors only, specifically excluding exhibits of a philosophic, religious or political nature. This exclusion to apply to ArMPAC, Arizona Right to Life Committee and other similar organizations.

1974 MEETING LOCATION

Discussion was held concerning the alternating of annual meetings between Tucson and the Phoenix area each year. The general feeling of the committee was to adopt this policy, but they wanted to wait until after the 1975 meeting in Tucson to assess the success of that meeting.

It was moved and carried to recommend to the Board of Directors to seek tentative hotel commitments from the Safari Hotel in Scottsdale and the Braniff Place Hotel in Tucson for the 1977 meeting. The final decision as to location to be made at the conclusion of the 1975 meeting.

Mr. Robinson reported the following have been confirmed:

1975 — Braniff Place — Tucson 4/22-26/75

1976 — Safari Hotel — Scottsdale 4/27-5/1/76

1975 MEETING FORMAT

Board of Directors request for back-to-back

House of Delegates meetings

The committee reviewed the Board of Directors letter of 5/3/74 in which the following motion appeared:

"It was moved and carried to ask the Scientific Assembly Committee to consider changing the format of the annual meeting so that the business days follow each other."

Considerable discussion ensued regarding the merits of the various proposals in light of the success of the format used over the past few years.

It was moved and carried to recommend to the Board of Directors that there be no change in the present format of the annual meeting, and that the House of Delegates continue to meet on Tuesday afternoon and again on Saturday morning.

NAVAJO HEALTH AUTHORITY

Letter of 4/8/74 from Dermont W. Melick, M.D., suggesting that the Navajo Health Authority be asked to be on the 1975 meeting program for the purpose of providing an updated report of the Project HOPE

activity over the past 4½ years was discussed at some length.

It was moved and carried to include a breakfast panel on the subject of "Indian Health" in the 1975 annual meeting. Such panel to include participation of the Navajo Health Authority.

ARIZONA DIVISION, AMERICAN CANCER SOCIETY

The subject organization's letter of 5/23/74 offering to provide papers, exhibits, etc. for the 1975 annual meeting was reviewed.

It was determined to ask them to submit scientific paper and exhibit applications in the usual fashion when they are solicited later this year.

SCHOOL FOR 1976 PROGRAM

It was moved and carried to invite the following schools, in the order listed, to provide the 1976 annual meeting program:

1. University of Utah, College of Medicine
2. University of California, Davis, School of Medicine
3. University of Illinois College of Medicine, Chicago

CORRESPONDENCE

Robert L. Hagan, M.D., letter 5/21/74

Dr. Hagan's letter outlining the problems encountered during the 1974 golf tournament was reviewed.

It was moved and carried to compensate Dr. Hagan for his out of pocket expenses in the amount of \$175.50.

OTHER BUSINESS

Paul H. Duffey, M.D., Resignation

The committee accepted Dr. Duffey's resignation with regret.

Facility Tour

Following a tour of the hotel and civic center, it was determined that we would limit scientific sessions and exhibits to the first floor of the exhibit hall of the Tucson Civic Center. House of Delegates, Breakfast panels, Specialty luncheons and other activities to be held in the Braniff Place Hotel facilities.

Golf & Tennis Tournament Chairmen

A variety of names were suggested as possible chairmen for the subject tournaments. Mr. Robinson is to contact nominees and report back.

Meeting adjourned 3:12 p.m.

William E. Crisp, M.D.
Secretary

MATERNAL AND CHILD HEALTH CARE COMMITTEE

Meeting of the Maternal and Child Health Care Committee of the Arizona Medical Association, Inc., held at 810 West Bethany Home Road, Phoenix, Arizona, on Thursday, June 6, 1974, a quorum being present, convened at 5:36 p.m., Raymond J. Jennett, Chairman presiding.

MINUTES

Minutes of the meeting held December 12, 1973 were approved as distributed.

STANDING COMMITTEE

Dr. Jennett informed the Committee that the Association's Bylaws had been changed during the annual meeting providing for the Maternal and Child Health Care Committee as a standing committee and announced the Committee members as confirmed by the Board of Directors.

Further, it was the intent to continue the Sections as developed under the Ad Hoc Committee during the past year, namely:

Section on Services for Children — Glenn M. Friedman, M.D., Chairman

Section on Data Collection and Analysis — William J. Moore, M.D., Chairman

Section on Maternal Services — Walter B. Cherny, M.D., Chairman

Section on Perinatal Planning — William J. R. Daily, M.D., Chairman

Osteopathic Representative

It was suggested that the Arizona Osteopathic Medical Association have a representative on the Committee.

It was moved and carried to invite a representative of the Arizona Osteopathic Medical Association to membership on the Maternal and Child Health Care Committee and that the representative be selected by the president of the Osteopathic Association specializing in pediatrics or obstetrics.

Mandatory Newborn Insurance

Dr. Meyers announced that the Arizona Legislature had enacted the Mandatory Newborn Insurance as proposed by the Arizona Pediatric Society and this Committee. (HB 2185, Chapter 173 was signed into law by the Governor on May 16, 1974).

Received for information.

SECTION ON MATERNAL SERVICES

Abortion Reporting Form

Dr. Cherny informed the Committee that the Section cooperated with the Arizona Department of Health Services in developing the abortion reporting form which is currently being field tested. Concern was expressed that the abortion reporting form was to be used only in hospitals.

It was moved and carried to recommend to the Arizona Department of Health Services that the abortion reporting form be requested of clinics, physicians' offices and health care facilities, wherever abortions may be performed.

Maternal Mortality Studies

Dr. Cherny announced that the Arizona Section, American College of OB-GYN, had determined during its most recent meeting to reactivate its maternal mortality studies. David Pent, M.D., Chairman of the Arizona Section of the American College of OB-GYN and the Section on Maternal Services, would work toward appropriate liaison to accomplish an on-going maternal mortality study.

Received for information.

Mandatory Maternal Insurance Benefits

The Section on Maternal Services has discussed the possibility of introducing State legislation to provide for mandatory maternal benefits in insurance policies. The success of the mandatory newborn insurance benefits is encouraging. The Section plans on meeting with representatives from the insurance industry (HIAA, HIC), Blue Cross-Blue Shield and insurance consultants in the near future to discuss model provisions developed by the American College of OB-GYN. The State of Georgia almost enacted such a provision during their recent legislature.

Received for information.

Maternal Transport Program

There was considerable discussion on the feasibilities of a maternal transport program for high risk obstetrical cases being developed in Arizona on essentially the same basis as the premature baby transport project which has proven to be such a success. Dr. Baum indicated that the Department of Health Services is currently requesting strong statements of priorities and that this could be considered a favorable program to be funded by the legislature.

It was moved and carried that the Section on Maternal Services study the possibilities of an organized, funded maternal transport program to improve fetal mortality and morbidity.

Review

SECTION ON SERVICES FOR CHILDREN

Dr. Friedman reported on the activities of the Section on Services for Children. Programs to date have included Learning Disabilities Project at Good Samaritan Hospital; Dental Prevention — Fluoridation Programs by the Department of Health Services; Nutritional Program (Women, Infant, Children Program; WIC) by the Department of Health Services; and the Family Approach to the Primary Prevention of Atherosclerosis presented by Glenn Friedman, M.D. Future meetings will include school health, infant death, immunization and other subjects of unmet needs for children. The intent is to identify problems of children and come to grips on how best to solve those needs.

Received for information.

SECTION ON DATA COLLECTION AND ANALYSIS

Dr. Moore reported that he had discussed the necessity for legislation to provide for an Arizona Health Information Center with James Schamadan, M.D., Director, Department of Health Services. It has been determined that the enabling act for the Department of Health Services authorizes the development of a health information center through rules and regulations and further legislation is unnecessary except for funding. It is Dr. Schamadan's intent to establish an extensive health data system. This system will be developed under the Division of Planning and Research directed by Louis C. Kossuth, M.D. Dr. Schamadan has formally requested Dr. Kossuth to utilize the Section on Data Collection and Analysis as an advisory committee for the development of the health data system.

Received for information.

SECTION ON PERINATAL PLANNING

Dr. Daily reported on the apparent success of the perinatal care programs developed in Arizona. There appears to be enough information now generated to prove the value of such programs through the Indian Health Services, University Hospital, Good Samaritan and St. Joseph's Hospitals. There is a need now to put all information together to assess the total picture for Arizona and to further develop an Arizona perinatal program.

Robert Wood Johnson Foundation

Dr. Jennett reported that he and Arthur D. Nelson, M.D. attended a meeting of the Robert Wood Johnson

Foundation on May 16, 1974. It was felt that possible grants being awarded by the Foundation would serve the interest of the Section on Perinatal Planning. A summary of the meeting provided by Dr. Jennett follows.

"The meeting was conducted by four members of the staff of the Robert Wood Johnson Foundation. The meeting was opened with a brief description of the background of the Foundation which was established by Robert Wood Johnson, founder of Johnson and Johnson Company of New Brunswick, New Jersey.

Next, Dr. Walsh McDermott outlined the chief interests of the Foundation in the area of medical care. They are most concerned with the problems of delivery and access to health care. Their major fundings have been in this area. They do not, in general, fund or like to fund what they term "high, hard technology projects."

In undertaking projects, they look for programs with reasonable probability of "National Visibility," "Contagious Programs," and "Ripple Effect." Their goals were listed as follows:

1. Approving access to frontline basic personal ambulatory care (out of hospital care).
2. Programs that improved qualitative performance.
3. Encouragement of groups who are examining alternatives in long range health care planning.

Their reasons for establishing this approach to their funding was the opinion that their (sic) is a lack of system of medical care. That is, "a system of readily available care for everyone." They are, therefore, interested in anything that can produce improvement in this regard such as regionalization. They view any improvement in readily available health care to be tied completely to insurance and government pay systems. They believe that until there is universal coverage under either governmental insurance or private insurance, the goal cannot be achieved. Therefore, any demonstration projects that they will fund must have documentation as to **cost effectiveness**, because they believe that until this can be demonstrated, the chances of universal insurance coverage are poor. Relating to perinatal care and regionalization thereof, they ask themselves the following question, "What would happen if regional programs were carried out on a defined population so that the program could be both predictive as to its health effects and to its cost?"

In addressing the problem of "defined population," which they approached on a geographic basis, they were interested in how a program would work "not in the shadow of a medical center but in a typical portion of the country." They were looking for a network that would be a feasible and manageable proportion. They have tentatively defined this as an area with a population of **700,000 to 1.4 million** with approximately 20,000 births per year.

They intend to identify up to five such areas, each representing a prototype of a section of the country.

Financial Scope of Project: They intend to commit approximately \$12-13,000,000 to this project. They anticipate that there will be several hundred thousand dollars expended in "start up funds." Thereafter, each project would receive approximately \$400,000 per year for five years. This would be exclusive of evaluation cost which would come out of a different fund.

Scope of Project: As noted above, the number of institutions which should be banded together in the project would yield about 15-20,000 births annually. All hospitals in the area including those primarily devoted to private practice to governmental hospitals and county hospitals should be included in this project. The emphasis would be on an organization of a network and not on "high technology." It should be noted that Dr. Salisbury of the National Foundation—March of Dimes stated that they would probably look forward to funding technological projects in coordination with these geographic projects of the Robert Wood Johnson Foundation.

Within the established network, the tasks to be accomplished would be the establishment of objective criteria for high risk pregnancies to develop a scoring system which would make some objective evaluation of which patients should be admitted to the center hospitals, provide more intensive care of high risk pregnancies, document the care of these and hopefully begin to do developmental testing. However, on the latter, no decision has been made as they are getting consultation as to the scope of developmental testing which should be included. The projects, however would include care of the infant during the first year of life.

General Observations About Their Concept of Regionalization:

1. They stated that one objective was to correct the imbalance of staffing and to destroy the "artificial barriers" between obstetricians and pediatricians.
2. They view systems of transport as an important factor. There has been much experience for the neonate and little experience as far as transport of the mother.
3. Perinatal centers cannot be "ivory towers" open only to the super specialists but one which include the practitioners to which they can turn to care for their patient.
4. There would need to be obligatory, around the clock consultation available through some type of medical emergency communications system.
5. There would need to be follow-up of all of the high risk neonates which were cared for both inside and outside of the center. This will require a deep level of cooperation between all of the health personnel involved.
6. These programs cannot be started in an area "starting from scratch."
7. All of the population must be included and they will not consider any project which is only a governmental or county segment being cared for in the system.
8. The logical development is not their main aim but would not be completely excluded if it were integral to the development of the functioning of the region. Again it was emphasized that the National Foundation does fund hardware and people as well as services.
9. There was continuing emphasis on evaluation and they view this as the distinguishing characteristic of the program they envision. The effect of the program on both mortality and morbidity, would need to be reviewed. They are interested in evaluation beyond just the usual neurologic evaluation

and would hope to evaluate psychological and social adaptation of the high risk infants.

10. The pooling of resources in the defined population area was emphasized, both financial and facilities.
11. The key words in their entire presentation were: Documentation, defined population, regionalization, "general ability", "ripple effect", "contagiousness", that is the applicability of their funded programs to other regions with the same general characteristics.

Plan of Attack: They plan to send out in two or three weeks, questionnaires to selected institutions to determine their self evaluation as to whether they would have the capabilities of launching a program of the scope envisioned by them. They view this as going out to those selected "centers" which would act as the "hub of the wheel" in their vision of the way regionalization will work. These questionnaires are to go out to thirty carefully selected university medical centers. This produced a tremendous amount of rather heated discussion from the participants as to why only university medical centers had been selected inasmuch of the regionalization to date had occurred outside of medical centers per se. Their reason, as stated, was that they could not comprehend any institution having the capabilities which they envisioned outside of a university medical center. However, they did state that if any institution thought they would qualify, they would be welcome to write and a questionnaire would be sent to them."

It was moved and carried to recommend that the Arizona Medical Association through the Maternal and Child Health Care Committee develop a grant application to the Robert Wood Johnson Foundation to demonstrate the effectiveness of perinatal health care. Further, that the chairman of the Maternal and Child Health Care Committee select a committee of three to develop such a grant application in collaboration with the University of Arizona, College of Medicine; Arizona Department of Health Services and other appropriate institutions and organizations.

Dr. Jennett appointed William J. R. Daily, M.D., Chairman; Walter B. Cherny, M.D. and Harlan R. Giles, M.D. as a committee of three to develop a grant application to the Robert Wood Johnson Foundation.

Section Membership

It was moved and carried to confirm the following appointments to the sections:

Section on Data Collection and Analysis

William J. Moore, M.D., Chairman
Frederic W. Baum, M.D.
William K. Carlile, M.D.
William J. Dorson, Ph.D.
Glenn M. Friedman, M.D.
Alan Humphreys, Ph.D.
James M. Hurley, M.D.
Belton P. Meyer, M.D.
Hermann S. Rhu, Jr., M.D.
Ted J. Stuart, Jr., M.D.

Section on Maternal Services

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Jack D. Bashaw, M.D.
Frederic W. Baum, M.D.
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Owen Cranmer, M.D.
Harlan Giles, M.D.
Thomas W. Jensen, M.D.
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David Pent, M.D.
Raymond E. Williams, M.D.

Section on Services for Children

Glenn M. Friedman, M.D., Chairman
Frederic Baum, M.D.
Paul S. Bergeson, M.D.
Robert C. Cannell, M.D.
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Richard H. Reznick, M.D.
James L. Schamadan, M.D.
Gilbert L. Sechrist, M.D.
Mrs. Anita Yanochik

Section on Perinatal Planning

William J. Daily, M.D., Chairman
Harlan Giles, M.D., Vice Chairman
James A. Austin, M.D.
Frederic W. Baum, M.D.
Richard E. Brown, M.D.
William Carlile, M.D.
Walter B. Cherny, M.D.
Paddy R. Garver, M.D.
Thomas R. Harris, M.D.
Paul W. Kliewer, M.D.
James W. LaBelle, M.D.
William W. McKinley, Jr., M.D.
Gerald T. McMahon, M.D.

Meeting adjourned 9:58 p.m.

William E. Crisp, M.D.
Secretary

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CONTACT:

Thomas J. Groves, M.D.
6037 W. Elm St.
Phoenix, AZ 85033

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COCONINO COUNTY MEDICAL SOCIETY SUMMER MEDICAL SEMINAR

July 27 & 28, 1974
Little America, Flagstaff, AZ

SPONSOR: Coconino County Medical Society

CONTACT:

Merrill Abeshaus, M.D.
1355 N. Beaver St.
Flagstaff, AZ 86001

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THIRD ANNUAL SANTA FE CARDIOLOGY SYMPOSIUM

August 9, 10, 1974
Santa Fe Hilton
Santa Fe, New Mexico

SPONSOR: U of New Mexico School of Medicine,
Maytag Fund, Presbyterian Hospital
Albuquerque, New Mexico

CONTACT:

Santa Fe Cardiology Symposium
c/o Presbyterian Hospital Center
Albuquerque, New Mexico 87106

TUBERCULOSIS TODAY

October 1-3, 1974
Los Olivos Hotel, Phoenix, AZ

SPONSOR: Arizona Lung Assoc., Phoenix
Area Indian Health Service

CONTACT:

Michael Cynamon, M.D.
1440 E. Indian School Rd.
Phoenix, AZ

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CAMELBACK HOSPITAL CLINICAL CONFERENCE

3rd Tuesday monthly
Camelback Hospital, Phoenix, AZ

SPONSOR: Camelback Hospital

CONTACT:

Stuart M. Gould, Jr., M.D.
Medical Director
Camelback Hospital
5055 N. 34th St.
Phoenix, AZ 85018

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PHOENIX PSYCHIATRIC COUNCIL CONTINUING EDUCATION PROGRAM

September 1974 — May 1975
Arizona Medical Association Offices
810 W. Bethany Home Rd.
Phoenix, AZ 85013

SPONSOR: Phoenix Psychiatric Council

CONTACT:

Robert H. Barnes, M.D.
525 N. 18th St.
Phoenix, AZ 85006

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PATIENT STAFFING CONFERENCE

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AN UPDATE ON PSYCHOTROPIC DRUGS

October 4, 1974
Personnel & Education Bldg.
Arizona State Hospital
Phoenix, AZ

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CONTACT:

Eli Schlossberg, R.Ph.
Arizona State Hospital
2500 E. Van Buren
Phoenix, AZ

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SURGICAL GRAND ROUNDS 4TH TUESDAY OF EACH MONTH

Hospital Auditorium
Baptist Hospital, Phoenix

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CONTACT:

James B. Shields, M.D.
6036 N. 19th Ave.
Phoenix, AZ 85015

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WORKSHOP FOR TEACHERS IN FAMILY PRACTICE TRAINING

October 6-9, 1974
Tanque Verde Guest Ranch, Tucson, AZ

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U of A College of Medicine
Tucson, AZ

CONTACT:

Anthony F. Vuturo, M.D.
Dept. of Family & Community Medicine
U of A College of Medicine
Tucson, AZ 85724

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CARDIOLOGY CONFERENCE

Weekly — Friday 8-9 a.m.
St. Mary's Hospital Auditorium
Tucson, AZ

SPONSOR: St. Mary's Hospital

CONTACT:

A. L. Forte, M.D.
St. Mary's Hospital
Tucson, AZ 85724

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PROBLEM ORIENTED FAMILY PRACTICE REVIEW COURSE

October 10-13, 1974

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Tucson, AZ 85724

CONTACT:

Anthony F. Vuturo, M.D.
Dept. of Family & Community Medicine
U of A College of Medicine
Tucson, AZ 85724

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PROBLEM CASE WORKSHOPS

3rd Monday of each month 7:30 a.m.
Room 4410, Arizona Medical Center, Tucson, AZ

SPONSOR: Division of Ophthalmology, U of A
College of Medicine

CONTACT:

H. E. Cross, M.D., Ph.D.
Arizona Medical Center
Dept. of Surgery
Tucson, AZ

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POST-CONFERENCE — TRAVEL STUDY PROGRAM

October 14-18, 1974
Guadalajara Hilton
Guadalajara, Sonora, Mexico

SPONSOR: Dept. of Family & Community Medicine
U of A College of Medicine
Tucson, AZ 85724

CONTACT:

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U of A College of Medicine
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CLINICAL CANCER CONFERENCE

3rd Wednesday Every Month
Butler Bldg. Conference Room
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CONTACT:

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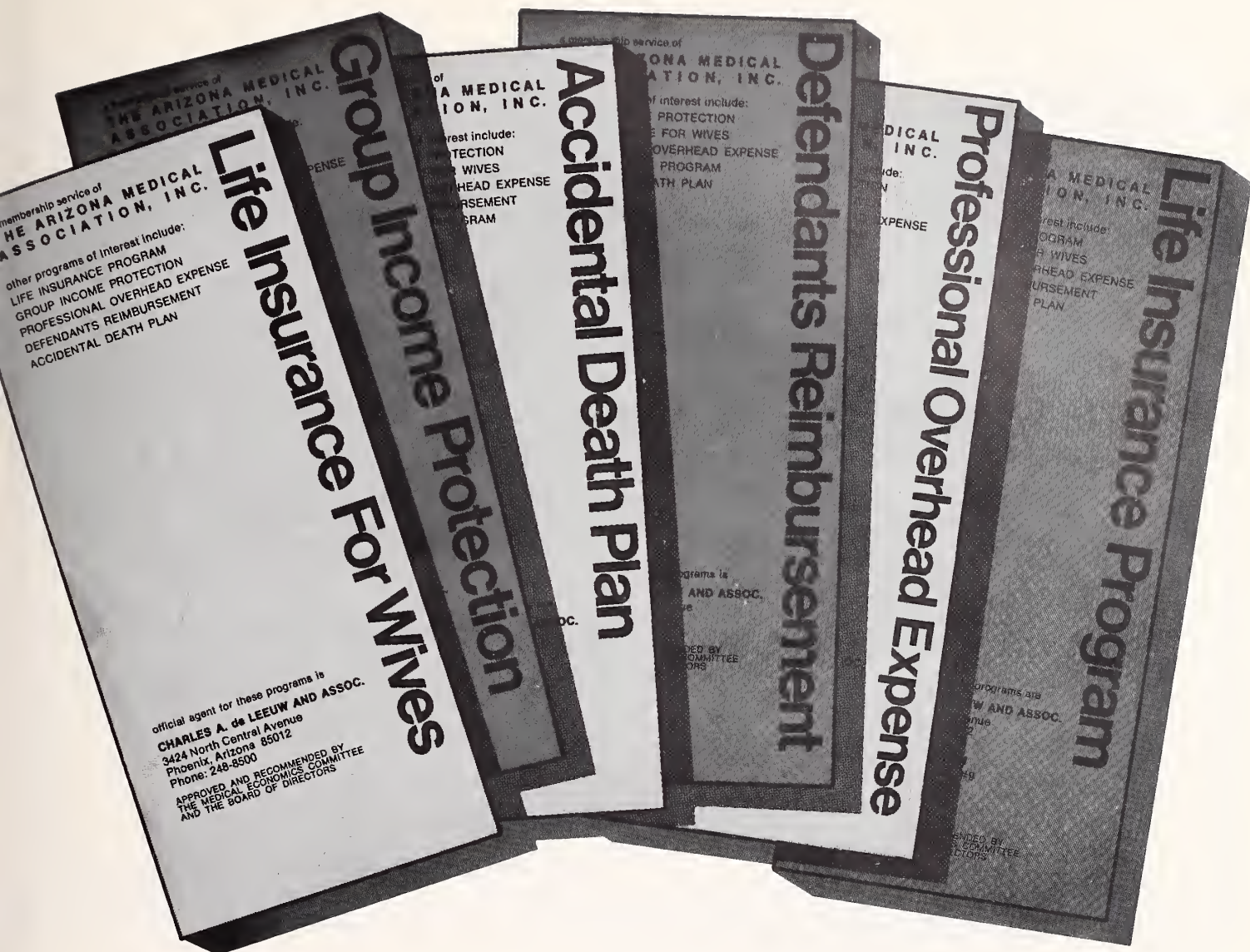
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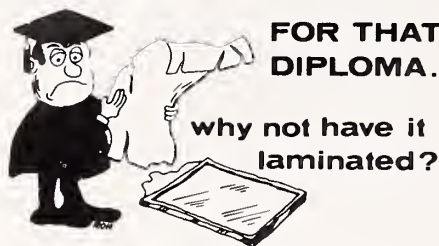
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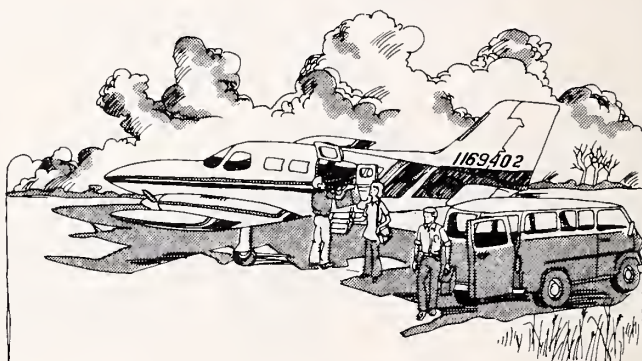
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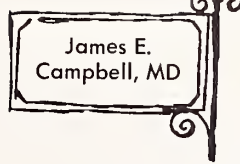
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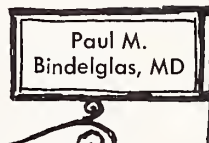
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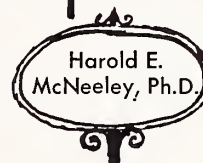
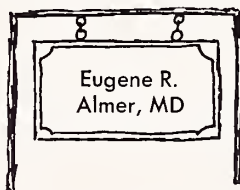
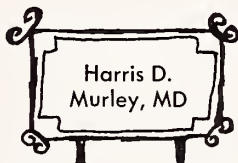
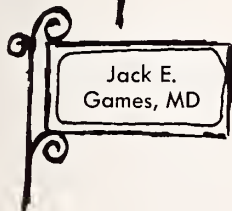
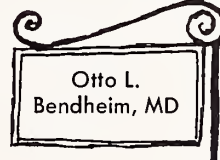
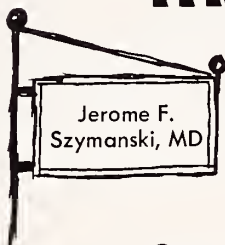
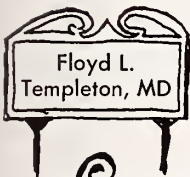
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propantheline bromide

Indications: Pro-Banthine is effective as adjunctive therapy in the treatment of peptic ulcer. Dosage must be adjusted to the individual.

Contraindications: Glaucoma, obstructive disease of the gastrointestinal tract, obstructive uropathy, intestinal atony, toxic megacolon, hiatal hernia associated with reflux esophagitis, or unstable cardiovascular adjustment in acute hemorrhage.

Warnings: Patients with severe cardiac disease should be given this medication with caution.

Fever and possibly heat stroke may occur due to anhidrosis.

In theory a curare-like action may occur, with loss of voluntary muscle

control. For such patients prompt and continuing artificial respiration should be applied until the drug effect has been exhausted.

Diarrhea in an ileostomy patient may indicate obstruction, and the possibility should be considered before administering Pro-Banthine.

Precautions: Since varying degrees of urinary hesitancy may be evidenced by elderly males with prostatic hypertrophy, such patients should be advised to micturate at the time of taking the medication.

Overdosage should be avoided in patients severely ill with ulcerative colitis.

Adverse Reactions: Varying degrees of drying of salivary secretions may



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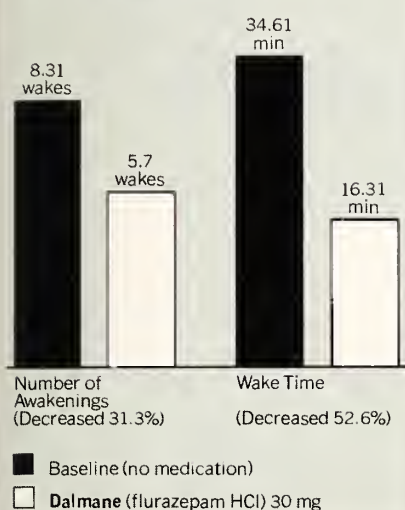


sleep
is usually maintained with
fewer nighttime awakenings...
a consistent benefit of

Dalmane[®]
(flurazepam HCl) proved by a
**17-night clinical study in the sleep research
laboratory evaluating effectiveness in
insomnia patients¹**

Eight patients received no medication on nights 1-4; Dalmane (flurazepam HCl) or placebo on nights 5-9; crossover capsule, nights 10-14; and no medication, nights 15-17. While placebo had no significant effect on sleep maintenance, Dalmane reduced nighttime awakenings by 55.1% when given on nights 5-9, 43.7% on nights 10-14. When four control subjects received placebo on the 10 "drug" nights, awakenings *increased* 11.5% over baseline.¹

Average Number of Awakenings and Minutes of Wake Time (4 Studies, 16 Subjects)²⁻⁵



confirmed by clinical studies in four geographically separated sleep research laboratories²⁻⁵

Using a 14-night protocol, involving eight insomniac and eight normal subjects, four studies confirmed the sleep-maintaining effectiveness of Dalmane (flurazepam HCl) and the reproducibility of this response. On average, one 30-mg capsule reduced number of awakenings by 31.3% and wake time by 52.6%. In all these studies, Dalmane induced sleep rapidly, on average within 17 minutes; reduced nighttime awakenings; and provided, on average, 7 to 8 hours of sleep without repeating dosage.²⁻⁵

Dalmane (flurazepam HCl) induces and maintains sleep, with relative safety

Dalmane is generally well tolerated; morning "hang-over" has been relatively infrequent. While dizziness, drowsiness, lightheadedness and the like have been noted most often, particularly in the elderly and debilitated, physicians should be aware of the possibility of more serious reactions, as noted in the Complete Product Information.

Before prescribing Dalmane (flurazepam HCl), please consult Complete Product Information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

Contraindications: Known hypersensitivity to flurazepam HCl.

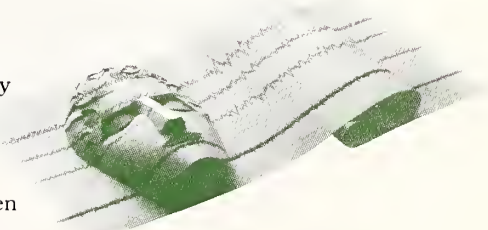
Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, e.g., excitement, stimulation and hyperactivity, have also been reported in rare instances.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.

Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.



when restful sleep is indicated

Dalmane[®] (flurazepam HCl)

One 30-mg capsule h.s. — usual adult dosage (15 mg may suffice in some patients).

One 15-mg capsule h.s. — initial dosage for elderly or debilitated patients.

- induces sleep within 17 minutes, on average
- reduces nighttime awakenings
- sustains sleep 7 to 8 hours, on average, without repeating dosage



ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

REFERENCES: 1. Kales J, et al: *Clin Pharmacol Ther* 12:691-697, Jul-Aug, 1971

2. Karacan I, Williams RL, Smith JR: The sleep laboratory in the investigation of sleep and sleep disturbances. Scientific exhibit at the 124th annual meeting of the American Psychiatric Association, Washington DC, May 3-7, 1971

3. Frost JD Jr: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ

4. Vogel GW: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ

5. Dement WC: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ

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satisfy the needs of doctors. That's why we'll continue to work with
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August 1974 / Vol. 31, No. 8

ARIZONA MEDICINE

JOURNAL OF ARIZONA MEDICAL ASSOCIATION

MEDICAL SOCIETY OF THE UNITED STATES AND MEXICO

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The Role of the Detail Man

"I may be prejudiced, but I am very much in favor of the detail men I meet. Most of them are knowledgeable about the drugs they promote and can be a great help in acquainting me with new medication."

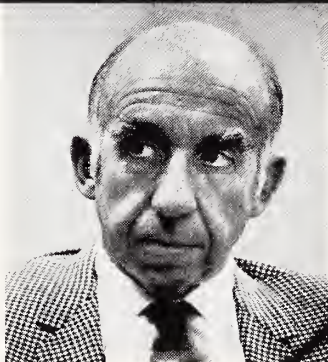
Family Physician's Perception

I think that most general practitioners in this area feel as I do about the detail man. Over the years I have gotten to know most of the men who visit me regularly and they in turn have become aware of my particular interests and the nature of my practice. They, therefore, limit their discussion as much as possible to the areas of interest to me. Since I usually see the same representative again in future visits, it is in his best interest to supply me with the most honest, factual, as well as up-to-date information about his products.



Dr. Willard Gobbell
Family Physician
Encino, California

Dr. Jeremiah Stamler
Chairman
Department of Community
Health and Preventive
Medicine, and Dingman
Professor of Cardiology
Northwestern University
Medical School



"In the total picture of dealing with health problems in this country there is a potential for detail men to play a meaningful role."

The Positive Influence

My contact with representatives and salesmen of the pharmaceutical industry is the type of contact that people in a medical center, research people, and academic people have and that's in all likelihood on a somewhat different level from that of the practicing physician.

Let me touch on how I personally perceive the role of the sales representative. These men reach large numbers of health professionals. Thus they could be—and at times actually are—disseminators of useful information. They could consistently serve a real educational function in their ability to discuss their products.

At present they do distribute printed material, brochures and pamphlets—some of it scientifically sound and therefore truly useful—as well as some excellent films produced by the pharmaceutical industry. When they function in this

Opinion
&
Dialogue

Is He a Source of Information?

Yes, with certain reservations. The average sales representative has a great fund of information about the drug products he is responsible for. He is usually able to answer most questions fully and intelligently. He can also supply reprints of articles that contain a great deal of information. Here, too, I exercise some caution. I usually accept most of the statements and opinions that I find in the papers and studies which come from the larger teaching facilities. It goes without saying that a physician should also rely on other sources for his information on pharmacology.

Training of Sales Representatives

Ideally, a candidate for the position as a sales representative of a pharmaceutical company should be a graduate pharmacist who has a questioning mind. I don't think this is possible in every case, and so it becomes the responsibility

of the pharmaceutical company to train these individuals comprehensively. It is of very great importance that the detail man's knowledge of the product he represents be constantly reviewed as well as updated. This phase of the sales representative's education should be a major responsibility of the medical department of the pharmaceutical company.

I am certain that most of these companies take special care to give their detail men a great deal of information about the products they produce—information about indications, contraindications, side effects and precautions. Yet, although most of the detail men are well informed, some, unfortunately, are not. It might be helpful if sales representatives were reassessed every few years to determine whether or not they are able to fulfill their important function. Incidentally, I feel the same way about periodic assessments of everyone

in the health care field, whether they be general practitioners, surgeons or salesmen.

Value of Sampling

I personally am in favor of limited sampling. I do not use sampling in order to perform clinical testing of a drug. I feel that drug testing should rightly be left to the pharmacology researcher and to the large teaching institutions where such testing can be done in a controlled environment.

I do not use samples as a "starter dose" for my patients. I do, however, find samples of drugs to be of value in that they permit me to see what the particular medication looks like. I get to see the various forms of the particular medication at first hand, and if it is in a liquid form I take the time to taste it. In that way I am able to give my patients more complete information about the particular medications that I prescribe for them.

capacity they are indeed useful; particularly in the fact that they disseminate broadly based educational material and serve not just as "pushers" of their drugs.

The Other Side of the Coin

Obviously, the pharmaceutical companies are not producing all this material as a labor of love—they are in the business of selling products for profit. In this regard the ambitious and improperly motivated sales representative can exert a negative influence on the practicing physician, both by presenting a one-sided picture of his product, and by encouraging the practitioner to depend too heavily on drugs for his total therapy. In these ways, the salesman has often distorted objective reality and undermined his potential role as an educator.

The Industry Responsibility

Since the detail man must be an information resource as well as a representative of his particular pharmaceutical company, he should be carefully selected and

thoroughly trained. That training, perforce, must be an ongoing one. There must be a continuing battle within and with the pharmaceutical industry for high quality not only in the selection and training of its sales representatives, but also in the development of all of its promotional and educational material.

The industry must be ready to accept constructive as well as corrective criticism from experts in the field and consumer spokesmen, and be willing to accept independent peer review. The better educated and prepared the salesman is, the more medically accurate his materials, the better off the pharmaceutical industry, health professionals and the public—i.e., the patients—will be.

Physician Responsibility

The practicing physician is in constant need of up-dated information on therapeutics, including drugs. He should and does make use of drug information and answers to specific questions supplied by the pharmaceutical representative. However, that informa-

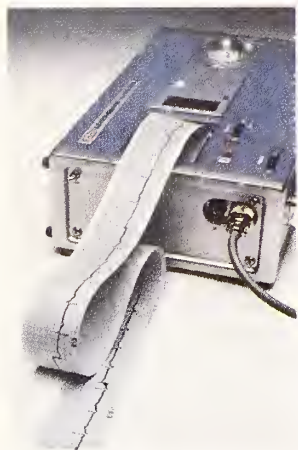
tion must not be his main source of continuing education. The practitioner must keep up with what is current by making use of scientific journals, refresher courses, and information received at scientific meetings.

The practicing physician not only has the right, but has the responsibility to demand that the pharmaceutical company and its representatives supply a high level of valid and useful information. I feel certain that if such a high level is demanded by the physician as well as the public, this demand will be met by an alert and concerned pharmaceutical industry.

From my experience, my impression is that sectors of the pharmaceutical industry are indeed ethical. I challenge the industry as a whole to live up to that word in its finest sense.

Pharmaceutical
Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D. C. 20005





Why add Librium® (chlordiazepoxide HCl) to your cardiovascular regimen?

Excessive anxiety in susceptible patients can set in motion a chain of responses which add to the heart's work and thereby increase the possibility of cardiovascular complications. Furthermore, intense anxiety may interfere with effective medical management since some patients, in an attempt to deny their illness, may resist acceptance of necessary medication, dietary restrictions and other therapeutic directives. When counseling and reassurance alone are inadequate to

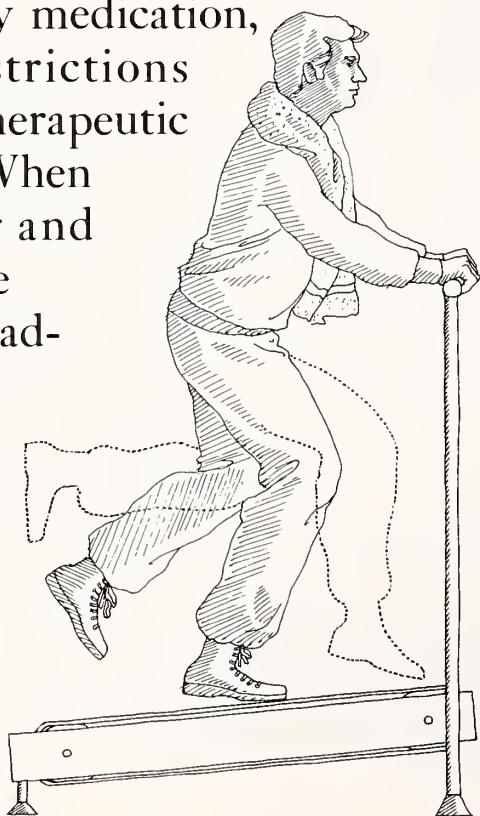


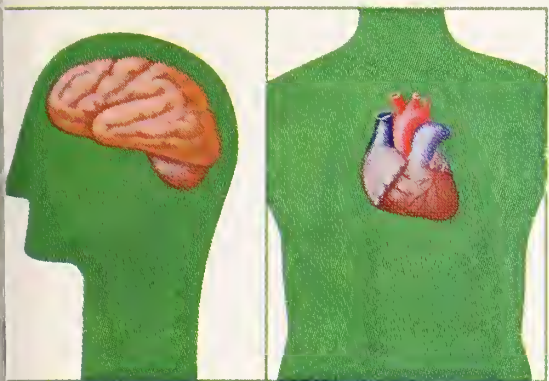
relieve undue anxiety, adjunctive Librium (chlordiazepoxide HCl) may be beneficial.

**"Specific" for anxiety reduction...
wide margin of safety**

Librium is used as an adjunct to primary cardiovascular medications, since it acts directly on the central nervous system, reducing excessive anxiety and emotional tension. In so doing, Librium indirectly affects cardiovascular function.

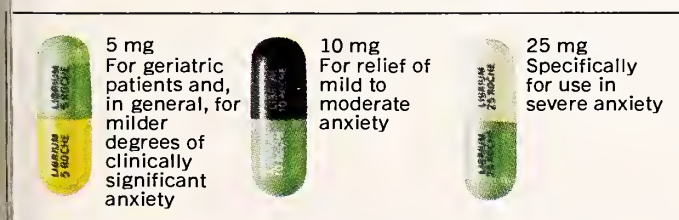
Librium has a high degree of antianxiety effectiveness with a wide margin of safety. In proper dosage, Librium usually helps calm the overanxious patient without unduly interfering with mental acuity or general performance. In the elderly and debilitated, the initial dosage is 5 mg *b.i.d.* or less to preclude ataxia or oversedation, in





creasing gradually as needed and tolerated.

Librium is used concomitantly with certain specific medications of other classes of drugs, such as cardiac glycosides, diuretics, antihypertensive agents, vasodilators and anticoagulants. Although clinical studies have not established a cause and effect relationship, physicians should be aware that variable effects on blood coagulation have been reported very rarely in patients receiving oral anticoagulants and Librium. After anxiety has been reduced to tolerable levels, Librium therapy should be discontinued.



For relief of excessive anxiety
adjunctive

Librium® 10 mg
(chlordiazepoxide HCl)
1 or 2 capsules t.i.d./q.i.d.



Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

Supplied: Librium® Capsules containing 5 mg, 10 mg or 25 mg chlordiazepoxide HCl. Libritabs® Tablets containing 5 mg, 10 mg or 25 mg chlordiazepoxide.



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

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Address all correspondence to the
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Bruce E. Robinson
Business Manager

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CONTRIBUTIONS

The Editor sincerely solicits contributions of scientific articles for publication in ARIZONA MEDICINE. All such contributions are greatly appreciated. All will be given equal consideration.

Material submitted for publication in ARIZONA MEDICINE should conform to the following policies:

1. Manuscripts, including references or bibliography, should be typewritten, double-spaced, on one side of the paper only, and the original and a carbon enclosed.

2. Be guided by the general rules of medical writing as followed by the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

3. Although the Editors try to catch inaccuracies, the ultimate responsibility is the author's.

4. Articles are accepted for publication only if they are contributed exclusively to this Journal. Ordinarily, contributors will be notified within 60 days if a manuscript is accepted for publication. Every effort will be made to return unused manuscripts.

5. The Journal reserves the right to edit all material.

6. Reprints will be supplied to the author at printing cost.

Rondomycin[®]

(methacycline HCl)

CONTRAINDICATIONS: Hypersensitivity to any of the tetracyclines.

WARNINGS: Tetracycline usage during tooth development (last half of pregnancy to eight years) may cause permanent tooth discoloration (yellow-gray-brown), which is more common during long-term use but has occurred after repeated short-term courses. Enamel hypoplasia has also been reported. **Tetracyclines should not be used in this age group unless other drugs are not likely to be effective or are contraindicated.**

Usage in pregnancy. (See above **WARNINGS** about use during tooth development.)

Animal studies indicate that tetracyclines cross the placenta and can be toxic to the developing fetus (often related to retardation of skeletal development). Embryotoxicity has also been noted in animals treated early in pregnancy.

Usage in newborns, infants, and children. (See above **WARNINGS** about use during tooth development.)

All tetracyclines form a stable calcium complex in any bone-forming tissue. A decrease in fibula growth rate observed in prematures given oral tetracycline 25 mg/kg every 6 hours was reversible when drug was discontinued.

Tetracyclines are present in milk of lactating women taking tetracyclines.

To avoid excess systemic accumulation and liver toxicity in patients with impaired renal function, reduce usual total dosage and, if therapy is prolonged, consider serum level determinations of drug. The anti-anabolic action of tetracyclines may increase BUN. While not a problem in normal renal function, in patients with significantly impaired function, higher tetracycline serum levels may lead to azotemia, hyperphosphatemia, and acidosis.

Photosensitivity manifested by exaggerated sunburn reaction has occurred with tetracyclines. Patients apt to be exposed to direct sunlight or ultraviolet light should be so advised, and treatment should be discontinued at first evidence of skin erythema.

PRECAUTIONS: If superinfection occurs due to overgrowth of nonsusceptible organisms, including fungi, discontinue antibiotic and start appropriate therapy.

In venereal disease, when coexistent syphilis is suspected, perform darkfield examination before therapy, and serologically test for syphilis monthly for at least four months.

Tetracyclines have been shown to depress plasma prothrombin activity; patients on anticoagulant therapy may require downward adjustment of their anticoagulant dosage.

In long-term therapy, perform periodic organ system evaluations (including blood, renal, hepatic).

Treat all Group A beta-hemolytic streptococcal infections for at least 10 days.

Since bacteriostatic drugs may interfere with the bactericidal action of penicillin, avoid giving tetracycline with penicillin.

ADVERSE REACTIONS: Gastrointestinal (oral and parenteral forms): anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis, inflammatory lesions (with monilial overgrowth) in the anogenital region.

Skin: maculopapular and erythematous rashes; exfoliative dermatitis (uncommon). Photosensitivity is discussed above (See **WARNINGS**).

Renal toxicity: rise in BUN, apparently dose related (See **WARNINGS**).

Hypersensitivity: urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus.

Bulging fontanels, reported in young infants after full therapeutic dosage, have disappeared rapidly when drug was discontinued.

Blood: hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia.

Over prolonged periods, tetracyclines have been reported to produce brown-black microscopic discoloration of thyroid glands; no abnormalities of thyroid function studies are known to occur.

USUAL DOSAGE: Adults—600 mg daily, divided into two or four equally spaced doses. More severe infections: an initial dose of 300 mg followed by 150 mg every six hours or 300 mg every 12 hours. Gonorrhea: In uncomplicated gonorrhea, when penicillin is contraindicated, 'Rondomycin' (methacycline HCl) may be used for treating both males and females in the following clinical dosage schedule: 900 mg initially, followed by 300 mg q. i. d. for a total of 5.4 grams.

For treatment of syphilis, when penicillin is contraindicated, a total of 18 to 24 grams of 'Rondomycin' (methacycline HCl) in equally divided doses over a period of 10-15 days should be given. Close follow-up, including laboratory tests, is recommended.

Eaton Agent pneumonia: 900 mg daily for six days.

Children—3 to 6 mg/lb/day divided into two to four equally spaced doses.

Therapy should be continued for at least 24-48 hours after symptoms and fever have subsided.

Concomitant therapy: Antacids containing aluminum, calcium or magnesium impair absorption and are contraindicated. Food and some dairy products also interfere. Give drug one hour before or two hours after meals. Pediatric oral dosage forms should not be given with milk formulas and should be given at least one hour prior to feeding.

In patients with renal impairment (see **WARNINGS**), total dosage should be decreased by reducing recommended individual doses or by extending time intervals between doses.

In streptococcal infections, a therapeutic dose should be given for at least 10 days.

SUPPLIED: 'Rondomycin' (methacycline HCl): 150 mg and 300 mg capsules; syrup containing 75 mg/5 cc methacycline HCl.

Before prescribing, consult package circular or latest PDR information.

Rev. 6/73



WALLACE LABORATORIES
CRANBURY, NEW JERSEY 08512



**When the focus is on bronchitis due to
susceptible strains of *H. influenzae* and pneumococci***

Randomycin[®] 300 mg.
[methacycline HCl] Capsules

Delivers from the very first dose:

**Studies show that after the first dose serum levels rapidly rise above
minimum *in vitro* inhibitory concentrations**

*Since many strains are known to be resistant, routine sensitivity testing is recommended.



STANFORD UNIVERSITY SCHOOL OF MEDICINE
OFFICE OF POSTGRADUATE MEDICAL EDUCATION

*announces two interdepartmental
five-day, comprehensive refresher courses*

PRIMARY CARE OCTOBER 7-11, 1974

FOR FAMILY AND GENERAL PRACTITIONERS, GENERAL INTERNISTS AND GENERAL PEDIATRICIANS

Designed as a review of the principles and procedures involved in the management of patients with problems commonly encountered in primary care, the program includes a morning lecture series and afternoon elective problem-solving sessions, seminars, and demonstrations. Tuition for the course is \$235, with registration required no later than October 4.

General lectures will cover the following topics: birth control, when and how to transfuse, motor vehicle injuries, prevention of heart attack, pre-CCU management of heart attack, rehabilitation after heart attack, urinary tract infections, nutritional anemia, management of rheumatoid and osteoarthritis, headache, depression, sleep disorders, new antibiotics, office management of diabetes, hypertension, comprehensive approach to primary care.

Elective sessions will include: **behavior modification:** obesity, smoking, alcoholism; **bones and joints:** neck and arm pain, low back and leg pain, bursitis and tendonitis, athletic injuries; **medical emergencies:** resuscitation, arrhythmias, drug ingestion, coma; **allergy:** hay fever, asthma, eczema and urticaria; **problem-oriented records:** the defined data base, construction of the problem list, workshop; **trauma:** hand injuries, face injuries, head and spine injuries, chest injuries; **dermatology:** contact dermatitis, bacterial and viral infections, fungal infections, dermatoses; **acid-base:** acidosis, alkalosis, mixed problems; **genetics and child health:** general review and cytogenetics, genetic counseling and prenatal diagnosis; immunization, school problems.

Faculty for this course will consist of thirty-five physicians of the Stanford University School of Medicine.

INTENSIVE CARE OCTOBER 28-NOVEMBER 1, 1974

FOR ALL PHYSICIANS INVOLVED IN THE CARE OF THE CRITICALLY ILL OR INJURED PATIENT

This course will review in detail the current status of management principles and procedures applicable to critically ill and critically injured persons. Topics of general interest will be covered in morning lectures, with the afternoon program offering a choice of problem-solving sessions and seminars and demonstrations in specialized topics. Thirty Stanford University School of Medicine faculty members will participate.

General lectures will cover: hemodynamic monitoring, antiarrhythmic drugs, surgery for ischemic heart disease, respiratory failure: pathophysiology-manifestations and management, the practical use of ventilators, clotting mechanisms, common bleeding problems: congenital-acquired, diabetic ketoacidosis and hyperosmolar coma, lactic acidosis, neurological emergencies, thromboembolism, drainage of the urinary tract.

Elective sessions will include: **EKG problems:** acute myocardial infarction, tachyarrhythmias, bradyarrhythmias, changes in severe illness; **blood gas and acid-base problems:** respiratory acidosis and alkalosis, metabolic acidosis, metabolic alkalosis, oxygen transport; **salt and water problems:** water, sodium, potassium, miscellaneous syndromes; **acute myocardial infarction:** cardiogenic shock, arrhythmias, emergency surgery, acute rehabilitation in CCU; **ICU methods:** resuscitation, protecting the brain after arrest, central venous pressure and arterial catheters, pacemakers; **trauma:** injuries to the face, injuries to the chest, injuries to the head and spine; **neonatal crises:** neonatal asphyxia, respiratory distress syndrome, sepsis, metabolic crises in the newborn; **ICU management problems:** use of blood components, acute renal failure, antibiotics in septic crises, hyperalimentation.

Tuition for this course is \$225, with registration required no later than October 25. Early registration is advisable as this course has been oversubscribed in previous years.

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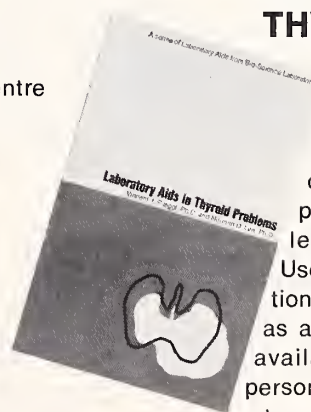
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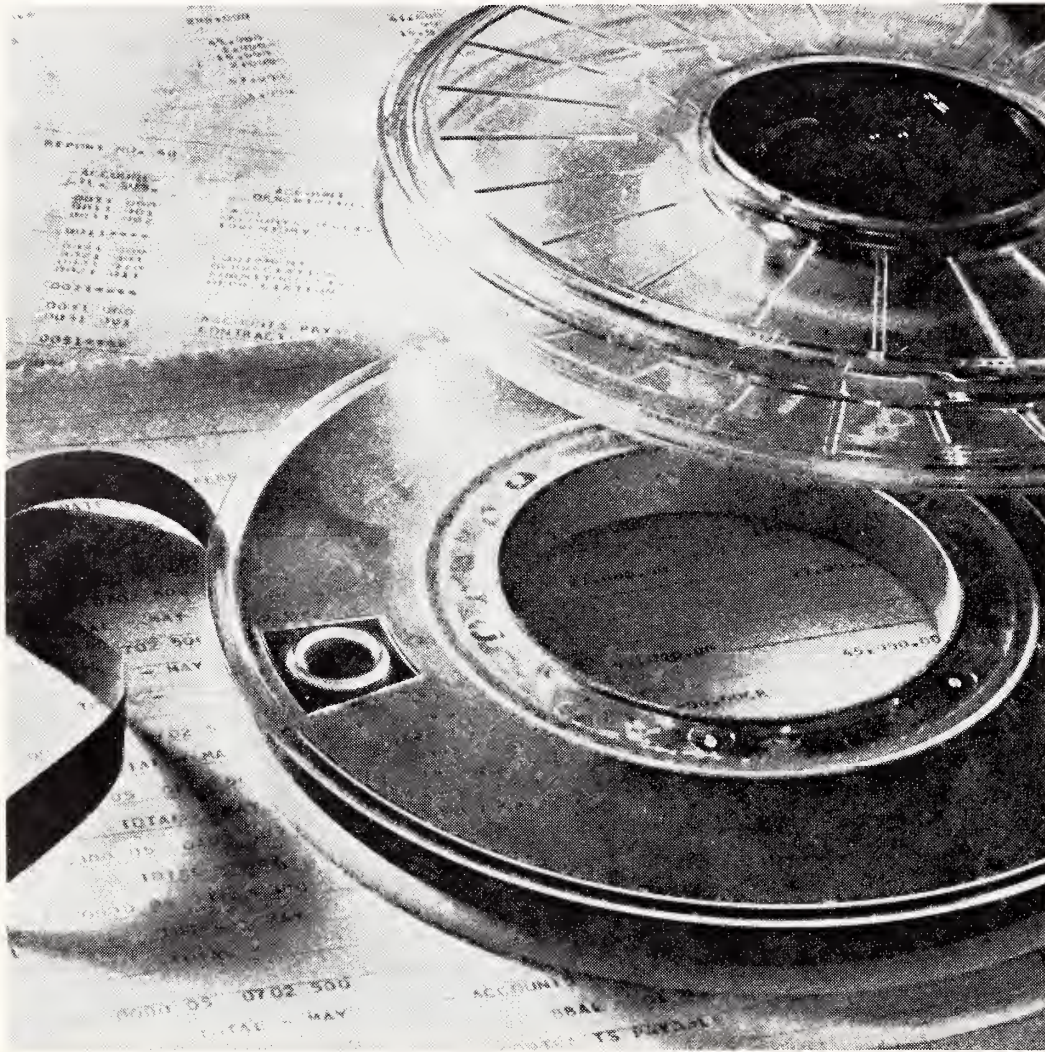
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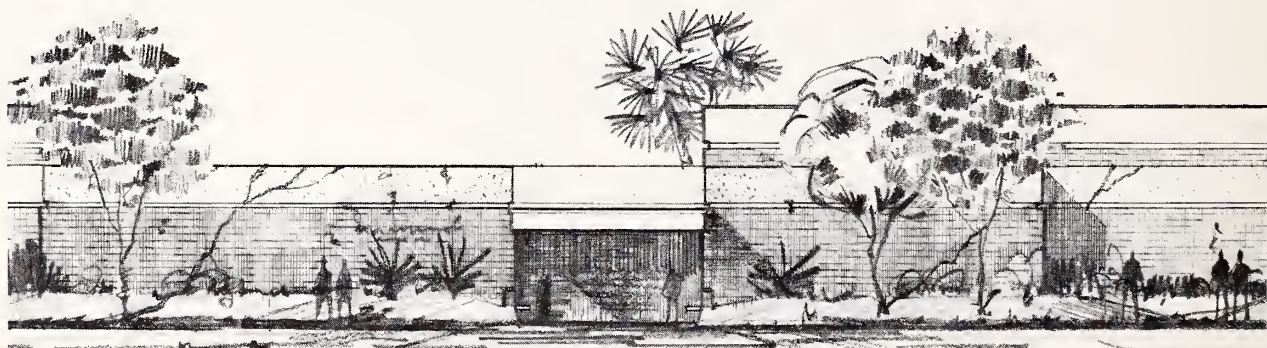
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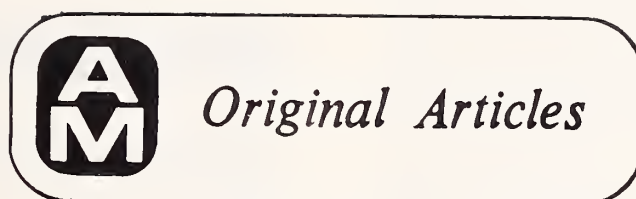
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ECHOCARDIOGRAPHY IN CONGENITAL HEART DISEASE

Hugh D. Allen, M.D.

Stanley J. Goldberg, M.D.

Echocardiography has rapidly become a useful tool for the cardiologist. This article illustrates its application in the diagnosis of congenital heart disease, and adds another dimension for unraveling the uncertainties of the malformed heart.

Echocardiography (echo) is rapidly emerging as one of the most important cardiac diagnostic tools available to the physician. This technique was introduced into the U.S. about 10 years ago. Although not available in all hospitals today, its use is increasing. The application of echo to the diagnosis of the child with cardiac disease has been a logical extension.

Echo permits the non-invasive display of dynamic physiology and anatomy. This is accomplished by passing a narrow beam of high frequency sound via a transducer through airless portions of the thorax and receiving the reflected sound with the same transducer. In order for the transducer to act as a receiver and a transmitter, the sound is pulsed approximately 1,000 times per second. One per-cent of the time the trans-

ducer produces sound and 99% of the time the transducer listens for echos. Different tissues have slightly different acoustical impedance. An echo is produced whenever an interface of two tissues of different acoustical impedance is penetrated by the sound beam. Echos from structures perpendicular to the beam are received by the transducer and are displayed according to the structure's distance from the chest wall-transducer interface. Fortunately, all soft tissues of the thorax transmit sound at approximately 1540 m/sec. Thus, the precise distance that an echo has traveled can be displayed. The sound energy has been shown to be biologically non-toxic at the levels used for diagnostic work.

Figure I shows a typical examination technique used in our laboratory.

Recognition of the characteristic cardiac echo

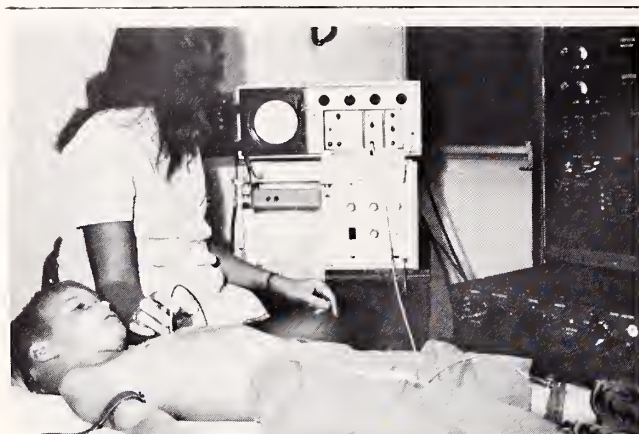


Figure 1

This figure demonstrates the equipment in an ultrasonic laboratory. The child needs no sedation and the test is painless. The ultrasonic technician is shown holding the transducer at approximately the lower left sternal border. To the left of the technician is an ultrasonic stripechart recorder and the ultrasonic transmitting-receiving device. To the far left is another type of ultrasonic recorder which uses wet processing. Not shown in this picture is a third type of recorder which uses a polaroid camera attached to the ultrasonic transmitting-receiving apparatus. The latter photographs the oscilloscope and therefore can record only a limited number of beats.

patterns consumed the first years of research. Most identification was accomplished by injecting saline, blood, or eardiogreen into a known chamber of great vessel while observing the echocardiogram. Pressure injection of these materials produces a stream of echos and therefore permits positive correlation of structures and their echo representation. Thus identified, the characteristic motion pattern of such areas of the heart were catalogued so that injection is now rarely necessary.

The area of the transducer beam is quite small with respect to the area of the heart. It is thus necessary to angle the transducer on the chest (scanning) or to move the transducer to different locations on the chest wall. Scanning is similar to panning a movie camera and has the advantage of showing continuous anatomical relationships. Moving the transducer from point to point is similar to taking several still photographs. Each technique is of value in different situations.

EQUIPMENT

Three pieces of equipment are generally used: a transducer, a transmitter-receiver combination, and a recording device. The higher the frequency of the transducer, the better the resolution, but lower frequency transducers permit greater tissue penetration. The transducers most useful for children are of higher frequency than those used for adults. In our laboratory, most work is accomplished with a 5.0 or 7.5 MHz transducer. Lower

frequency units (2.0 to 3.5 MHz) often give better results in large children and adults.

Various transmitter-receiver units are available and each has its advantages and disadvantages. No attempt will be made in this publication to discuss these units.

Two general recording techniques are in use; single picture and stripechart. The single picture recording technique is unequivocally more difficult and fraught with more error than the stripechart method. The operator must photograph the oscilloscope face at precisely the correct moment and the child must not move. As difficult as it is, considerable excellent work has been accomplished with this system. Stripechart recording permits the operator to record long runs of continuous information. Anatomic continuity can be

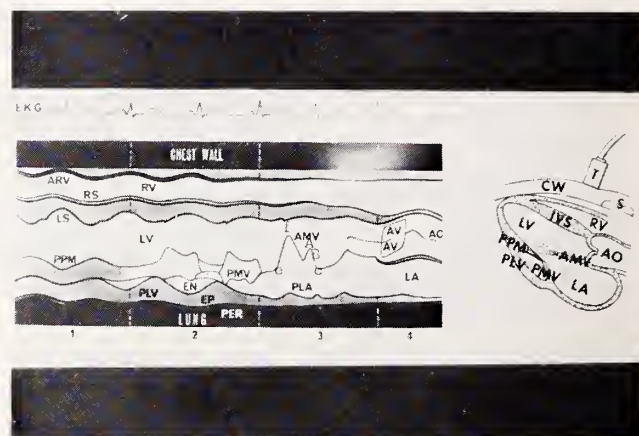


Figure 2

On the right is diagrammed the cross-sectional anatomy of the heart. The transducer is demonstrated on the chest wall (CW). In the left hand panel are cross-sectional areas which might be traversed by a beam from the transducer. The farthest left panel demonstrates a beam which passes through an area near the apex of the heart. The second panel represents a more cephalad area with beam passage through the chordae and the mitral leaflet. This plane is most commonly utilized to measure the various dimensions of the heart. The third panel is still more cephalad and passes through the section of the heart where the posterior mitral leaflet is lost. The fourth panel demonstrates a beam passed through the most cephalad portion of the heart with transection of the aorta, aortic valve and left atrium. Details of this figure are discussed in the text.

- ARV = anterior right ventricle
- RV = right ventricle
- LV = left ventricle
- PPM = posterior papillary muscle
- PLV = posterior left ventricular wall
- EP = epicardium
- EN = endocardium
- PLA = posterior left atrial wall
- d, e, a, f = points of motion of the mitral valve — are discussed in the text.
- RS = right septum
- LS = left septum
- PMV = posterior mitral valve
- AMV = anterior mitral valve
- AV = aortic valve
- AO = aorta
- LA = left atrium
- PER = pericardium

demonstrated with more certainty and numerous beats can be recorded. However, the instrumentation for the stripchart recording is much more expensive than single photograph equipment. We feel results obtained justify the expense.

The normal echocardiogram is probably best understood by observation of a modification of Dr. Feigenbaum's diagram as illustrated in Figure 2. This diagram depicts the echo as a transducer is moved from the apex of the heart through the mitral valve to its continuity with the aorta. The figure shows distinct layers of cavities and walls. Proceeding from anterior to posterior, the beam passes through chest wall, anterior right ventricular wall, right ventricular cavity, septum, left ventricular cavity, posterior papillary muscle and left ventricular wall. With the beam directed more inferiorly the attachment of the papillary muscle to the posterior wall is seen. The papillary muscle is also seen as

continuous with the chordae tendinae and the latter with the valve leaflet. Other important continuities are the septum with the anterior aorta, the anterior mitral leaflet with the posterior aortic wall and the posterior left ventricular wall with the left atrial wall. Not demonstrated in this particular diagram are the pulmonary and tricuspid valves which can also be visualized by echo.

Certain congenital cardiac abnormalities can be diagnosed by echocardiography and the effects of other lesions can be followed. A few of these conditions will be discussed.

Patent ductus arteriosus causes an increase in pulmonary blood flow and thus the left atrium and left ventricle must receive an increased volume. Although the ductus arteriosus cannot be visualized by echocardiography, the resultant increase in atrial and ventricular size can be accumulated, abnormal measurements can be recognized. Moreover, one may also follow day to day changes in the child with this lesion. An example of this is demonstrated in Figure 3. In this instance, a premature with a ductus arteriosus was noted to have a very large left atrium which increased with time and became dramatically smaller after ligation of the ductus arteriosus. In our experience both the dimension of the left ventricle and atrium can be serially followed in such a patient and useful information can be obtained. A similar principle holds for following patients with ventricular septal defects.

Much has been written and learned about septal motion of patients with right ventricular volume overload. One of the most common reasons for right ventricular overload is an atrial septal defect. Other described lesions include total anomalous pulmonary venous return, partial anomalous pulmonary venous return, tricuspid and pulmonary insufficiency. In a normal individual, the septum contributes to the constriction of the cavity of the left ventricle during systole and enlargement during diastole. Patients with right ventricular volume overload demonstrate paradoxical septal motion. The highest part of the septum demonstrates "paradoxical" motion in the normal. The septal motion must be viewed in relationship to a landmark. We use the posterior mitral leaflet. In our experience the septal motion can be "normal" when the beam is directed low toward the apex. With echo, one cannot determine whether the paradoxical septal motion is specifically due to an atrial septal defect or

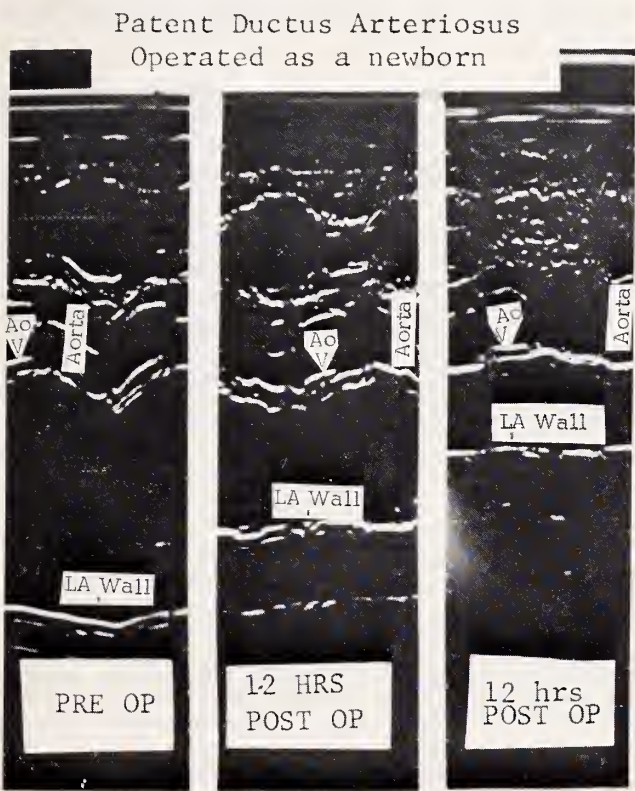


Figure 3
Three sequenced polaroid pictures utilizing the same gains are displayed. The child was a newborn with a large patent ductus arteriosus probably secondary to respiratory distress syndrome. One can see in the left hand panel that the left atrium is extremely large with respect to the aorta. The aorta has been marked and the aortic valve is seen to open and close normally. The second panel was taken between 1 and 2 hours post-operatively, and demonstrates appreciable decrease in left atrial size. The left atrium is now only slightly larger than the aorta. In the right hand panel the left atrium is still smaller and is now normal in dimension.
AO = aorta LA = left atrium

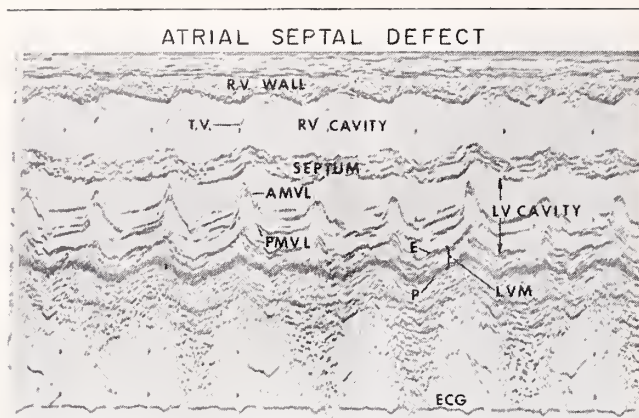


Figure 4

This figure demonstrates a stripchart recording showing the quality difference from the polaroid recording in Figure 3. This patient's echocardiogram demonstrates paradoxical septal motion. The septum normally constricts the left ventricle during systole, however, with atrial septal defects the septal motion is reversed and the septum moves anteriorly with systole. Also demonstrated in this photograph is the large right ventricle found with volume overload.

- TV = tricuspid valve
- RV = right ventricle
- PMVL = posterior mitral valve leaflet
- P = pericardium
- AMVL = anterior mitral valve leaflet
- LV = left ventricle
- E = endocardium
- LVM = left ventricular myocardium



Figure 5

Demonstrates an unusual AV valve in a patient with a complete atrioventricular canal. We feel that this valve represents the tricuspid valve. The unique feature of this valve in an AV canal is that it extends from the anterior wall of the heart to the posterior wall.

other causes of right ventricular overload. Figure 4 shows an example of paradoxical septal motion.

Some patients with endocardial cushion defects show a characteristic pattern which probably represents tricuspid valve motion. In these patients an atrio-ventricular valve appears to traverse the entire dimension of the ventricular cavity (Figure 5). Our experience indicates that this pattern is not always present in patients with endocardial cushion defects. In some, only paradoxical septal motion is present. Others show different patterns. The variability of echo patterns is not surprising since endocardial cushion defects exist in a very wide clinical spectrum.

Continuity of the anterior mitral leaflet with the posterior wall of the aorta and the continuity of the septum with anterior aortic wall have already been mentioned. Failure of such continuity is used diagnostically to indicate certain congenital abnormalities. Tetralogy of Fallot is characterized by discontinuity of the septum and anterior aortic wall. This pattern is the echo representation of an overriding aorta (Figure 6).

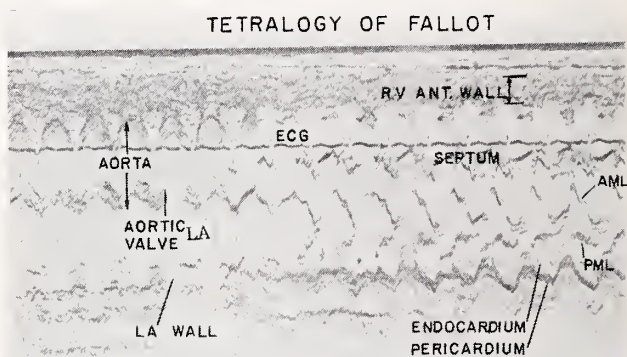


Figure 6

Demonstrates a classical echocardiogram from a patient with Tetralogy of Fallot. The basic feature to note is that the septum is not continuous with the anterior wall of the aorta. This is evidence of overriding of the aorta. Also note the thickness of the wall of the right ventricle. Each vertical dot displacement is 1 cm. and each horizontal dot displacement $\frac{1}{2}$ second. Notice that the posterior wall of the aorta is continuous with the anterior mitral leaflet. This is in contrast to double outlet right ventricle where there is aortic mitral discontinuity.

- AML = anterior mitral leaflet
- LA = left atrium
- PML = posterior mitral leaflet

Discontinuity of the anterior mitral leaflet and the posterior aortic wall has been suggested as a criterion for diagnosis of double outlet right ventricle. However, double outlet right ventricle is another disease with a wide spectrum. This echocardiographic finding may be valid in some instances, but not in all. With incorrect transducer placement and movement "discontinuity" can also be demonstrated in normals.

Many abnormalities of the mitral valve can be diagnosed by echocardiography. Prolapse of the posterior leaflet is relatively easily recognized as a posterior motion of the posterior mitral valve leaflet during mid to late systole. Mitral stenosis has the same characteristics in children as in adults. The E-F slope (refer to Figure 2) is reduced and the posterior leaflet assumes an anterior motion in diastole. Idiopathic hypertrophic subaortic stenosis (IHSS) can be recognized as a systolic anterior motion of the mitral valve which may touch the septum. The septum is thickened and the E-F anterior mitral valve slope is decreased. Finally, left ventricular failure is associated with decreased EF and DE slopes.

Echocardiography is the diagnostic procedure of choice for left atrial myxomata. A right ventricular tumor has recently been demonstrated echocardiographically in a neonate. The tumor compressed the left atrium and left ventricle to half their normal values, but these values were still greater than those found in the hypoplastic left heart syndrome.

Congenital aortic stenosis can be evaluated in some patients by echo. Although a thickened aortic valve may be recognized, the valve excursion may seem normal or decreased. One cannot rely upon the motion or thickness of the aortic valve to make a judgement about aortic stenosis. One can also recognize a dilated ascending aorta. Aortic insufficiency can be detected because the regurgitant stream strikes the anterior mitral valve leaflet during diastole and causes it to flutter. This flutter is characteristic of aortic insufficiency.

In the child, the pulmonary valve motion may be recorded in most instances. Little has been written about pulmonary valve motion and its abnormalities. Our experience has not yet led us to feel that there are sufficient diagnostic criteria for determining characteristics other than valve size.

Hypoplastic left heart syndrome is relatively easy to diagnose echocardiographically. Usually the mitral valve is small and the left ventricular cavity is slit-like and diminutive. The aortic root is usually quite small or, in rare instances, within lower normal limits. The right heart, on the other hand, is usually dilated, and thus the ventricular septum is more posteriorly placed than usual. The opposite findings are true of the valves and ventricles in hypoplastic right heart syndrome.

THE TECHNICAL ASPECT

The concept of test performance of the echocardiogram is almost completely opposite to that of the electrocardiogram. The electrocardiogram is a relatively simply performed test which can be delegated to a technician after appropriate but usually minimal instruction. The interpretation of an electrocardiogram requires considerable skill and experience and can be done subsequent to the recording of the electrocardiogram. On the other hand, echocardiography demands ultimate skill and interpretation during the recording of the echocardiogram. The operator must decide what is important while doing the study and must be certain that he records an adequate representation of what he sees. In effect, the operator must make or suspect the diagnosis and then record the characteristic echocardiographic representation. If he fails to suspect the diagnosis, he probably will not record the critical area of the heart in a manner that the diagnosis may be confirmed. A subsequent interpreter may have little or no capability to reach the correct conclusion unless the operator provides him with the critical pictures or stripchart recording.

Training, in our experience, has taken 3-6 months for a technician and no less for the physician. At the end of training, the individual is able to perform and interpret most examinations in a satisfactory manner. However, even greater experience as well as comprehensive knowledge of congenital cardiac pathologic anatomy is required to perform examinations of patients with more complex forms of congenital heart disease.

CONCLUSION

Echocardiography has proved to be an effective tool in the diagnosis of congenital cardiac disease. It provides some information which is difficult to obtain by any other technique such as: accurate measurements and assessment of the activity of certain cardiac chambers, walls, ventricular septum, and great vessels. Pericardial effusion can be diagnosed with relative certainty. It is a highly repeatable tool for longitudinal follow of patients.

Although echocardiography seems to offer a great many advantages it must be clearly understood that it is not a simple test. However, the combination of properly administered echocardiography, physical examination, history and other non-invasive tests should lead to more accurate diagnosis of children with cardiac disease.

THE SMALL BOWEL BARIUM STUDY A NEW LOOK AND TECHNIQUE



SAMUEL L. COHEN, M.D.

Roentgenologic examination of the small intestine, using duodenal intubation, is described. Paramedical assistance, prior to the roentgenologic examination, reduces patient-time in the department of roentgenology. Three examples are given.

ABSTRACT: A modification of a small bowel study has been done with a nasogastric duodenal tube. The results have been good and the study is rapid. There is little delay in the fluoroscopy room. This small bowel study should be a separate examination.

INDEX TERMS: Small bowel radiologic study, modification; paramedical personnel.

Many techniques have been described for the roentgenologic examination of the small intestine, but that most commonly employed is the small bowel follow-through of an upper gastrointestinal examination. This may be accomplished by serial films alone, a practice not recommended, or by serial films and and supplemented with additional fluoroscopy and spot films.

Because of the variability of the transit time for the contrast meal, the examination may extend over a period of hours, and this tends

From: Radiology Service, Veterans Administration Hospital, 7th St. and Indian School Rd., Phoenix, AZ 85012

to contribute to the neglect of additional fluoroscopy and spot films. Where transit time is rapid, overlap of the contrast-filled loops of intestine can result in obscuration of segments of the bowel that may be the only site of an abnormal pattern which, as a result, is not demonstrated on the serial films.

Posquera² first attempted the small bowel enema in 1929. Ghilew and Mengis, in 1938, and Gershon-Cohen and Shay,² in 1939, reported their experiences with this examination. More recently, Scott-Hardin,² in 1960, described a modification of the technique both for the duodenal intubation and for the administration of the enema itself.

Other described technical variations include the volume of the contrast meal, with some authors advocating as little as four ounces, and other favoring as much as twenty ounces of the standard barium sulfate meal.² Gastrograffin and Hyopaque have also been used. The ingestion of a glass of ice water after the contrast meal is advocated by some to accelerate the transit time. Neostigmine methylsulfate has been used for the same purpose.

None of these variations eliminate the unsatisfactory features of the interrupted small bowel series. It is felt that the roentgenologic examination of the small bowel should be treated as a special procedure, with fluoroscopy, spot

films and overhead films completed in one session. The retrograde small bowel enema, as described by Noveroske,¹ would seem to provide the best method of examination if it did not

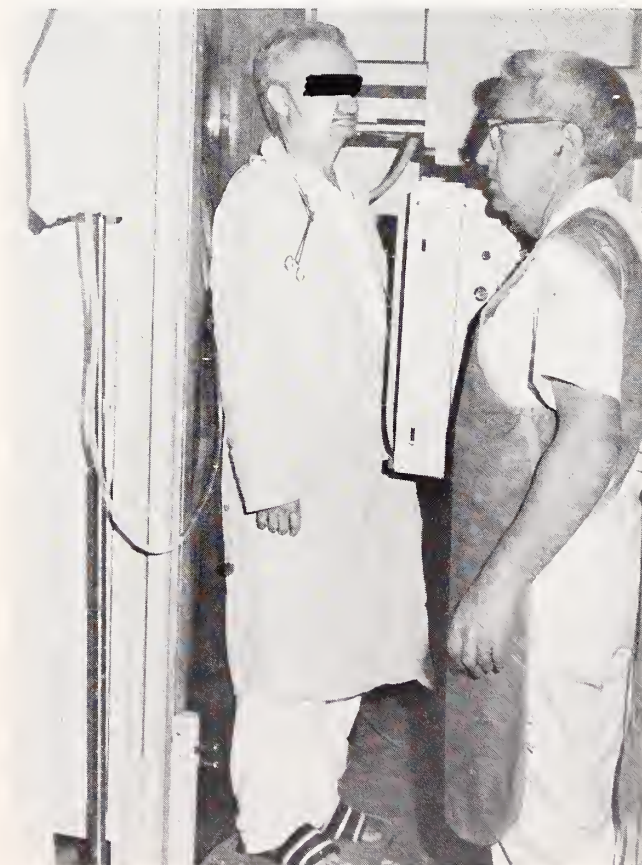


Figure 1

Patient being examined, as described, with technician in attendance.

entail too much of the radiologist's time by his involvement in the mechanics of preparation, a very definite and limiting factor in the retrograde small bowel study. This latter approach requires the tedious intubation of the distal small intestine prior to starting the administration of the contrast material.

There are, of course, limitations to any roentgen examination, and this is also true of the small bowel. We have developed a modification of techniques which usually results in excellent visualization of all segments of the small bowel. More importantly, the time the patient spends in the radiology department and the time of involvement of the radiologist with each examination is reduced to about 10-15 minutes. An occasional patient may require a follow-up observation at 30 minutes.

The method used here involves intubation of the patient in the gastroenterology ward-clinic by paramedical personnel trained in this procedure. A single lumen nasogastric tube with a single opening in the end of the tube, is passed through

one nostril into the patient's stomach. The patient then is made to lie on his right side so that the tube may be advanced to approximately the area of the duodenal bulb. Admittedly, problems may be encountered in patients with duodenal ulcer scarring or postoperative deformities.

The patient then reports to the x-ray department where the tube is advanced, under fluoroscopy, into the descending or fourth portion of the duodenum. A standard prepackaged disposable barium bag is (Figure 1) filled to approximately two liters with water and shaken thoroughly. This is then attached to the nasogastric tube. The patient may be erect or supine as desired. In most instances only 300 cc. is required to outline the entire small bowel, but occasionally 500 cc. may be necessary. No complications from these amounts have been observed. The enema bag is raised to a level of three feet above the stomach. Under the fluoroscope, the flow of the barium suspension can be readily controlled, permitting rotation of the patient for desired spot films in any eccentric projection. Filling of the



Figure 2

Case 1: 28 year old white male, with diabetes, psoriasis and chronic diarrhea. Film made at 2 hours. Pathological Diagnosis: Non-tropical sprue. Abnormal pattern.



Figure 3

Case 1: KJG. Our small bowel radiographic study showing no flocculation.

small bowel is usually accomplished in five to ten minutes, and complete examination of the entire small intestine rarely require more than 10-15 minutes.

The only time a patient has complained of distress was when the stomach was inadvertently filled and distended.

With the control of filling, and with direct fluoroscopic visualization, appropriate spot films of any segment of the small bowel can be obtained by the use of pressure or by rotation of the patient to uncover superimposed loops. The relatively short time interval to fill the small intestine prevents settling or flocculation of the inert barium, and the mucosal pattern of the small bowel is beautifully demonstrated.

An elaboration of the technique to use localized air contrast studies is planned, as is the use of Probanthine. Cineroentgenographic studies are also contemplated.

Three examples are presented: Figures 2 and 3, Case 1; Figure 4, Case; and Figures 5 and 6, Case 3.



Figure 4
Case 2: L, 60 year old white male, three month history of diarrhea. Our small bowel study, with malabsorption, at 10 minutes.



Figure 5 & 6
Case 3: JED, 41 year old white male, with diarrhea. Our small bowel study at 10 minutes, with spot films. Pathological Diagnosis: Pancreatic and lactose deficiency.



ACKNOWLEDGEMENTS: I wish to thank Dr. George F. Lull, Jr., for his advice in writing this article; Mrs. Sandra Brown for her secretarial help, and Mr. Donald E. Deuel for his photographic assistance.

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SPEECH PROBLEMS IN CHILDREN



Irwin Lehrhoff, Ph.D.

Pediatricians and family practitioners should become knowledgeable about speech problems in children. This article briefly discusses the types of speech disorders and emphasizes the interface between practitioner and speech pathologists.

Many pediatricians are faced with the common problems of whether to refer children for speech help, the age at which they should be referred, the perpetual question of whether they will outgrow their difficulty, and what type of speech problems can be helped. Many pediatricians are not even aware that such a person as a speech pathologist exists, and certainly very few understand the training or function of speech therapy. This article will discuss these and other questions relating to the field of speech.

That there are a total of four million speech-defective children in this country serves to emphasize the fact that speech is one of the most

complex of human skills. During the utterance of a single word, almost a hundred muscles move. Muscles that manipulate the larynx must be timed exactly with those of the chest, diaphragm, and abdomen, and also with those of the face, mouth, and throat. All students of human behavior marvel at the miracle of speech. The majority of us take it for granted.

Usually, if a child does not have adequate speech by the age of 4 years, he should be referred for help. Sometimes this should be done earlier. Children in the 2-to-3-year range will often mispronounce words in their process of learning to talk, but this learning procedure is perfectly normal. However, the child of 4 years

From: 240 W. Osborn Rd., Suite 116, Phoenix, Arizona 85013

and older with deviant and often unintelligible speech has a speech problem which is not outgrown. The common fallacy that children outgrow their errors, which is still believed by many physicians, has long been disproved by numerous studies in the speech field. If a child has a definite speech problem, it becomes more set in his habitual speech pattern as he grows older. When he enters school he is often ridiculed and teased by other children, and this in turn brings emotional problems which could have been avoided. The child suffers from profound feelings of inferiority and shyness and withdraws from social contacts. He may become depressed and sensitive and may adopt socially unacceptable behavior to compensate for his deficiencies in speech. Most speech disorders could probably be prevented if children did not have to learn the most difficult of all human coordinations with little help and much interference. Most of us do learn to master the art of speech. Speech pathologists, however, who deal with speech-defective children and adults recognize the wonderful achievement involved in learning to talk.

CLASSIFICATION OF SPEECH PROBLEMS

Delayed speech. A child's speech may be considered delayed if he has none or very few words by the age of 3 years. Usually by this age his sentence pattern is already established or he is putting two or three words together. Causes of delayed speech may be lack of motivation, improper learning, emotional conflicts, neuromuscular impairment, aphasia, mental retardation, or hearing loss.

These children should be referred to a speech specialist as early as possible. Most physicians are reluctant to refer a 3-year-old child for speech help. However, the majority of these children do not need any training at this age, but often the parents, after one interview, can learn to provide a better speech environment for the child, giving him more motivation and stimulation so that he will make an effort to learn to talk.

The possible causes of delayed speech in the normal child with no organic defects often become apparent after close observation. The child may not have any association with other children; or the parents, by striving for perfection, may discourage early speech attempts. The

mother may put too much pressure on the child to talk and make too many demands upon his speech. Sometimes older siblings talk for him and announce his needs so often that he feels no incentive to speak for himself. His wants are often anticipated by parents who rush to the child the moment he grunts and points to the desired object. Children talk because of their need for language.

The pediatrician must use his judgment in referring these children, but many problems can be avoided and parents' anxieties lessened if they are referred early.

Articulatory Disorders. Articulatory disorders consist of substitution, omission, and distortion of sounds, caused by organic abnormalities, motor incoordination, emotional conflicts, mental retardation, and improper habit patterns. Children with defective articulation should be referred for speech therapy by approximately 4 years of age. This is, of course, flexible, since certainly a 4-year-old child with extremely deviant articulation and unintelligible speech, who is becoming sensitive and frustrated by his inability to communicate and may already be teased by other children, should be referred earlier than a 5-year-old child, for instance, who has very few distortions and is not at all sensitive about his speech.

Various tests are used in evaluating articulatory disorders. In younger children testing is done with pictures, in older children by oral stimulation or sentences, or through a variety of other tests.

A phonetic analysis is used to determine the nature, number and characteristics of the articulatory errors. Stimulation is vital in determining which sounds will be easily mastered.

Therapy is presented through games and techniques at the child's level so that speech becomes enjoyable. General procedures are to: (1) present adequate language stimulation through reading, games, activities, and associated experiences; (2) eliminate or minimize the effect of factors causing the defect; (3) create vivid auditory impressions which will enable the child to recognize readily both the error and the correct sounds, and to discriminate between the two whenever he hears them; (4) teach correct production of the sounds so that they can be produced easily and voluntarily; (5) secure transfer of the correct sounds into connected speech in

a small nucleus of commonly used sounds and words; and (6) make the production of the correct sounds, instead of the error, habitual in all connected speech.

Voice disorders. Many voice disorders are associated with medical problems and should always be first referred to a competent otolaryngologist. Generally speaking, most voice problems in children will deal with the hypernasal voice quality of the cleft palate; throaty, guttural, or harsh voice of cerebral palsy; monotone and peculiar inflections of the deaf child, or vocal nodules. Other causes of voice disorders in children might be a hearing loss, delayed sexual development, puberal voice changes, sluggish articulation, strain, hypertension, imitation, and emotional maladjustment.

The voice quality of a child with a hearing loss often gives us a good clue as to the severity of the loss.

Treatment will vary with the individual child, and the proper time for referral is also variable.

Stuttering. Stuttering is a disorder characterized by blocking, prolongations, and repetitions of words, syllables, or sounds, usually caused by emotional problems.

When a child is first regarded as a stutterer, the only observable reactions are short, effortless prolongations or repetitions. The child is at first unaware that there has been any interruption or nonfluency. Sooner or later, however, this period of nonreacting acceptance is disturbed. Parents, teachers, or playmates react emotionally or call attention to the speech nonfluencies, and the child becomes aware of the fact that his manner of speaking is not acceptable to others and interferes with his communication. He is labeled a stutterer and becomes aware of his repetitions or hesitations. Behavior indicative of this awareness soon appears. The once unnoticed repetitions are followed by blocking and sudden

pauses. The child begins to force the speech attempt, and tension and fear develop which soon become habitual symptoms. Soon we have the secondary phase of stuttering. To some degree, and with variations from case to case, in time there are likely to be increased tension of the chest and mouth musculature, interference with the breathing pattern, social and emotional maladjustment, and symptoms of avoidance, postponement, antiexpectancy, starters, release, and disguise.

During the early nonfluent years, the pediatrician can give the parents many helpful suggestions such as never calling attention to the interruptions in the child's speech, never asking him to slow down or start over, making him feel that his interruptions are normal and perfectly acceptable, not labeling him a "stutterer", giving him ample opportunity to speak, and avoiding situations which are unduly frustrating, exciting, bewildering, tiring, humiliating, or frightening.

If, by the age of 5 years, the child is still blocking, repeating sounds or syllables, or hesitating, he should be referred for speech help, or sooner if the parents' anxieties grow or the child shows some of the aggravated reactions discussed previously.

Cleft Palate. Cleft palate speech is characterized by both articulatory and voice defects. Much can be done for the cleft palate child either surgically or through prosthesis. Prosthodontia has gained an important place in the rehabilitation of the cleft palate. Surgically, various operative techniques are used to close the cleft and lengthen or readjust the muscular tissue or velum. The parents should be directed to a speech therapist six months after surgical repair for various postoperative speech techniques, but regular training often does not actually begin until a later age. The aims of treatment are to strengthen the muscles of the soft palate and

those involved in the velopharyngeal closure, to teach the child to effect a better velopharyngeal closure and to direct the air stream through the oral opening, to increase the mobility of the tongue, lips, and other articulators, and to teach or correct articulation.

The main problem of speech re-education is that of training the patient to close the opening into the nose voluntarily by drawing the velum upward and backward, and constricting the pharyngeal wall to meet the velum. Incorrect tongue and lip positions in the various consonant sounds are the natural result of compensatory movements of the articulatory apparatus before palatal reconstruction has been provided. The postoperative cleft palate patient must, therefore, be guided into correct articulatory patterns. He must prevent overelevation of the dorsum of the tongue, keep the tensions in the pharynx at a minimal level, and phonate effectively.

Cerebral Palsy. The diagnosis of cerebral palsy is the province of the physician. Since cerebral palsy is a neuro-muscular handicap, it often affects muscles used during the act of speaking. More than 70 per cent of all cerebral palsy children will have speech difficulty. Usually, they should receive their speech therapy in conjunction with their educational program. There is no such thing as typical cerebral palsy speech. The cerebral palsy child presents individual problems of delayed speech, voice disorders, articulation difficulty, breathing problems, and the like. The therapeutic program is usually divided into a physiological approach and one of language stimulation. Since speech is an overlaid function, the muscle action used during the act of speaking as in chewing, swallowing, or sucking, must usually be improved. Often these youngsters are kept on a soft strained food program too long, and have later difficulty in chewing and also in speaking.

We have to take into account all of the frustrations that a handicapped child experiences which hinder language development. The normal child can explore his environment with his eyes, ears, head, hands, feet, and even his mouth with far greater ease than can the motor-handicapped child. These experiences become part of the language atmosphere of the child, and that is why a great portion of speech therapy must deal with language stimulation.

Hearing Loss. The language element must be given priority over any other in the training of the deaf or hard of hearing child. Possible characteristic signs that mark a hearing loss in young children are changes in voice quality, consistent ignoring of verbal directions, behavioral changes, lack of understanding, frequent requests for repetition of questions, close observation of the face of parents or others while talking, turning up the radio, phonograph, or television, and lack of response to household and other sounds occurring around him.

Before a child with a suspected hearing loss is referred to a speech therapist for training or testing, he should first be referred to a competent otolaryngologist for an ear, nose, and throat examination.

If needed, auditory training and lip reading instruction should begin as soon as possible, and, more important, a program should be worked out with the parents so that there can be complete cooperation between the parents, the therapist, the teacher, and the doctor, to give the child every possible opportunity for effecting better communication.

SUMMARY

The training and function of speech pathology are discussed, with emphasis placed on classification, proper time of referral, etiology, and treatment techniques of common speech disorders.

DR. DANIEL CLOUD – TRUSTEE

Dr. Dan Cloud by his recent election to the Board of Trustees of the American Medical Association has demonstrated once again his effectiveness at the national level as Senior Delegate from Arizona. He has brought honor to Arizona and to himself. His curriculum vitae is exemplary of the *complete physician* with a broad mixture of involvement in scientific medicine, teaching, new procedures, hospital service chief responsibilities, hospital and community affairs, national affairs, and family, civic and social responsibilities. Dr. Cloud will add youth, vigor, intelligence, humor, dedication, articulate ability and hope to the American Medical Association's Board of Trustees.

Arizona Medicine salutes Dan Cloud for what he has done and for what he will do in the future for the good of the medical profession. He will be the first to emphasize the basic premise that what is good for the patient and for the profession should be one and the same.

John R. Green, M.D.



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CLOUD COUNTRY – AMA's 123RD ANNUAL CONVENTION



Many exciting things occurred at the 123rd Annual Convention of the American Medical Association.

The most exciting to Arizona physicians was the election of Daniel T. Cloud, M.D. to the Board of Trustees. Dan's picture is on the cover. A most outstanding nominating speech was presented by Seymour I. Shapiro, M.D., Tucson. It was most effective and is reprinted here.

"NOMINATING SPEECH FOR DAN CLOUD

I have the unique honor of nominating for the first time in AMA history, a candidate from the State of Arizona for the AMA Board of Trustees. And Dan Cloud has the unique distinction of being that nominee. Educated and trained in Illinois, Dan has been in the private practice of pediatric surgery in Phoenix, Arizona, since 1955. He is dedicated to the highest principles of American medicine and the enhancement of the medical care provided to our patients.

Dan Cloud is a stalwart participant in organized medicine at the State and local levels. He played an important role in resisting the recent effort of a major Phoenix hospital to deprive its medical staff of its traditional responsibilities. Dan marshalled support from this House at its annual meeting one year ago and was instrumental in resolving the issue equitably.

At this crucial time for organized medicine, when we are outflanked by the Right and the

Left, confronted by third party payors and crowded from the rear by the Federal Government, it is a privilege to nominate for the Board of Trustees a man who is stable, yet aware of all the surrounding pressures, a man who is capable of assessing all viewpoints and arriving at a reasoned and objective position.

Dan Cloud typifies the youthful, innovative, vital element in the AMA which seeks a voice in the highest councils of organized medicine.

Dan has served this House since 1965, and two years ago was elected to the Council on Constitution and By-laws. He firmly believes that the Board of Trustees represents the operating arm of the House of Delegates, and should be responsive to its grass-roots constituency.

In aspiring to the office of Trustee, Dan Cloud offers vigor, enthusiasm and integrity. He is dynamic, articulate and conscientious. The State of Arizona takes great pleasure in nominating Dan Cloud for the Board of Trustees of the AMA."

Seymour I. Shapiro, M.D.

Here is a brief report, of other activities which occurred at the meeting:

AMA's 123rd ANNUAL CONVENTION in Chicago was attended by 7,391 physicians. Total registration was 17,702.

MALCOLM C. TODD, MD, Long Beach, Calif. was installed as the AMA's 129th president. Max H. Parrott, MD, was named president-elect in a close contest against Richard S. Wilbur, MD, Lake Forest, Ill. Joseph M. Ribar, MD, Fairbanks, Alaska, was elected vice president by acclamation. Re-elected by acclamation were Tom E. Nesbitt, MD, Nashville, Tenn. as speaker of the House and William Y. Rial, MD, Swarthmore, Pa., Vice Speaker. Re-elected to a full three-year term on the Board of Trustees was Raymond T. Holden, MD, Washington, D.C. Also elected to full three-year terms on the Board were James M. Blake, MD, Schenectady, N.Y.; Daniel Cloud, MD, Phoenix, Ariz.; and Hoyt D. Gardner, MD, Louisville, Ky. Frank J. Jirka, MD, Berwyn, Ill., was elected to fill the two-year unexpired term of James H. Sammons, MD, who resigned from the Board when he was named AMA's EVP-designate in March. Joe T. Nelson, MD was named to fill the one-year unexpired term created when Dr. Parrott, a trustee, was chosen president-elect. Under its newly approved simultaneous election procedure, the House required 13 ballots to select the six trustees.

AT THE BOARD OF TRUSTEES' organizational meeting, Richard E. Palmer, MD, Alexandria, Va., was re-elected chairman. The Board named Raymond T. Holden, MD, Washington, D.C., vice chairman and John H. Budd, MD, Cleveland, secretary-treasurer of the AMA and secretary of the Board. Named to serve on the Board's executive committee with Drs. Todd, Parrott, Palmer and Holden were Hoyt D. Gardner, MD, Louisville, Ky. and Robert B. Hunter, MD, Sedro Wooley, Wash. Kenneth C. Sawyer, MD, Denver, was re-elected president of the AMA-ERF Board of Directors. Dr. Budd was re-elected AMA-ERF vice-president and Dr. Hunter was re-elected secretary-treasurer.

OTHER ELECTIONS: Council on Constitution and ByLaws—Urban H. Eversole, MD, Wellesley, Mass., and Herman Smith, MD, Des Moines, Iowa; Council on Medical Education—Joseph M. White, Jr., MD, (re-elected); Richard C. Connor, MD, Tampa, Fla., and Charles Verheyden, MD, Rochester, Minn.; Council on Medical Service—Paul W. Burleson, MD, Birmingham, Ala. (re-elected); John G. Morrison, MD, San Leandro, Calif.; Robert T. Kelly, MD, Grand Rapids, Minn., and Douglas Hiza, MD, Iowa City, Iowa. Named to the Judicial Council by AMA President Malcolm C. Todd, MD, was Samuel Sherman, MD, San Francisco.

IN HIS INAUGURAL REMARKS, President Malcolm C. Todd, MD, proposed the formation of a "National Academy of Health" to form and guide a national health policy. He termed the proposed academy, made up of private-sector representatives of medical and health care, a proper alternative approach to the "public-utility" concept of health policy now being discussed in Congress. Dr. Todd said the AMA should take the leadership in developing a national health policy which can be "constructive rather than destructive . . . if the private sector of care seizes the initiative in getting it formulated." Dr. Todd also proposed that the AMA work to develop a nationwide "university without walls" to formalize and coordinate continuing medical education; develop nationwide proposals for arbitration as a means of setting professional liability charges, and no-fault insurance plans as a means of compensation in professional liability cases; and develop regulatory guidelines for the gathering and storing of information in computerized health data centers, to protect confidentiality. Dr. Todd addressed the subject of public con-

cern about modern health care by saying that the alleged "health care crisis" does not exist and that our "quality of care was never better—our population was never healthier."

OUTGOING PRESIDENT RUSSELL B. ROTH, MD, told the AMA's House of Delegates that he sees the welcome beginnings of a new political awakening and a new activism in medicine. "Almost every physician has been prodded into interest and awareness by something," whether it was federally mandated peer review, competition from prepaid health care providers, arbitrary cost restraints, or third party interference in medical practice, he said. Noting that "health care has now become a very special kind of political issue," Dr. Roth said, "it offers unique attractions to the politician or the political party in trouble." Dr. Roth termed federal legislation which places rigid quality controls on MDs and osteopaths on one hand and grants payment for chiropractic services under Medicare on the other, "a curious exercise in fundamental ignorance." He identified the need for a unified defense of professional freedoms as the greatest challenge facing medicine's leadership and said the AMA is moving to meet the challenge.

ADDRESSING THE HOUSE OF DELEGATES, Vice President Gerald R. Ford said that a national health insurance program is essential because of the prohibitive costs of catastrophic illnesses and the need to more effectively use and distribute medical resources. While declaring that physicians should work for their patients and "not for the bureaucrats in Washington," he added that the "government must do for the individual citizen what he cannot do for himself." The vice president congratulated the AMA for its constructive attitude and recommendations and said "your overall approach is respected by both Democrats and Republicans." He added, "in this national insurance discussion the AMA is not the problem but part of the solution to the problem." Ford emphasized the need to develop an NHI plan "in the spirit of mediation and moderation." He noted that "the Administration has now said that it is willing to make reasonable compromises to obtain action on health insurance." On the issue of confidentiality, Ford said, "We must find ways to minimize federal involvement in delivery of health care and achieve a mutually helpful private/public partnership . . . however, it is essential that we avoid bureaucratic intervention between the doctor and his pa-

tient — intervention that compromises the rights and privacy of both."

FOUR REPORTS AND 25 RESOLUTIONS ON PSRO came before the House of Delegates. The House adopted a reference committee substitute resolution instructing the Board of Trustees of the Association "to direct its efforts to achieve constructive amendments to the PSRO law and to ensure appropriate regulations and directives, with particular effort directed at amending those sections of the law which present potential dangers in the areas of confidentiality, malpractice, development of norms, quality of care, and the authority of the Secretary of HEW." The new policy statement also says the AMA should continue its efforts to achieve legislation which allows the profession to perform peer review in accordance with the profession's philosophy and the best interests of the patient.

INDIVIDUAL STATE ASSOCIATIONS that elect non-participation in PSRO would not be precluded from such a position by the AMA's new policy but are urged to develop effective non-PSRO review programs. Finally, the new policy declares that if ongoing evaluation of the PSRO program reveals that it does, in fact, adversely effect the quality of patient care, or conflict with Association policy, the Board of Trustees is instructed to use all legal and legislative means to rectify those shortcomings.

SIMULTANEOUS ELECTION OF AMA TRUSTEES was authorized by the House of Delegates and the method used at the Annual Convention to elect six trustees. The new bylaws provide that all nominees for trustee are to be listed alphabetically on a single ballot. Each elector has four votes and each vote is to be cast for a different nominee. No ballot is to be counted if it contains fewer or more than four votes. A nominee is elected if he receives a vote on a majority of the ballots cast and is one of the four nominees receiving the largest number of votes. If all vacancies are not filled on a ballot, the nominee with the lowest number of votes is dropped from the next ballot. The procedure is repeated until all vacancies are filled. Unexpired terms are filled the in same manner.

THE HOUSE REFERRED BACK TO THE BOARD of Trustees the "Guidelines for House-staff Contracts." The House asked the board to submit the guidelines to the Council on Medical Education, Council on Medical Service, Interns

and Residents Business Session, and the Board's Committee on Housestaff Affairs, and then report the conclusions at the 1974 Clinical Convention.

A NATIONWIDE PUBLIC EDUCATION PROGRAM to inform the public immediately of the critical professional liability problem was called for by the House of Delegates. The AMA is to act as the people's advocate and to reaffirm its commitment to malpractice prevention and to strengthen medical audit through the peer review process. The resolution also was referred to the Medical Liability Commission.

THE HOUSE REVIEWED the annual financial statement of the AMA for the fiscal year ending Nov. 30, 1973, as published in *JAMA*, June 3, 1974. The House called on the Board to adopt balanced budgets, insofar as possible, in which expenditures are not allowed to exceed income. The House asked the Board of Trustees to distribute to each delegate, alternate delegate, and constituent state association, as soon as practical after each meeting. After hearing a report on per diem allowances for officers and trustees, the House did not adopt a resolution calling for such reports annually. Also reported in response to the same resolution was the fact that only three AMA employees have contracts, the executive vice president designate and the two assistant executive vice presidents.

GUIDELINES TO DEVELOP a nationwide health insurance program for migrant workers were supported, in principle, by the House. The guidelines, developed by the Council on Medical Service, were referred by the House to the Board of Trustees for development of appropriate legislation. The Council on Medical Service's 104-page "report on Physician-Hospital Relations, 1974," also was approved. The report reviews current policies and practices and contains recommendations for physicians. The House of Delegates called for an extension of time for responding to proposed regulations after publication in the *Federal Register* to 90 days from the present 30 days. Also approved by the House was a call for repeal of the Kefauver-Harris Amendment, PL 87-781, under which the Food and Drug Administration is required to prove efficacy as well as safety of new drugs.

THE HOUSE DIRECTED the Council on Constitution and Bylaws to continue studying the issue of medical specialty society representation in the House. The Council held a special

open hearing on the subject just prior to the opening of the 1974 Annual Convention.

IN OTHER ACTIONS, the House urged the AMA and state medical associations to encourage acceptance of the uniform insurance claim form developed by the AMA; took several steps to protect the confidentiality of medical records; adopted a report calling for legislation to amend Medicare to provide not only for administrative but judicial review of Part B claims; agreed with the Council on Medical Service that while attempts to draft a so-called physician's bill rights were commendable, it would be unwise to codify the many rights and privileges accorded to physicians by custom and tradition; backed a moratorium on state licensing of additional health occupations.

\$1,207,478 WAS PRESENTED TO AMA-ERF by the Woman's Auxiliary to the AMA. The contribution was the largest amount ever given to the foundation by the auxiliary. The auxiliary of the California Medical Assn. made the largest contribution to AMA-ERF and the auxiliary of the Medical and Chirurgical Faculty of Maryland made the largest contribution per capita. Contributing \$20 or more per capita were the auxiliaries of Maryland, Nevada, Vermont, Montana, Tennessee, Alaska, Washington, D.C., Alabama, Indiana and Utah.

PRESENTATION OF SIX AMA AWARDS was made at the Annual Convention. William F. House, MD, DDS, Los Angeles, received the AMA's Distinguished Service Award for his research in the field of Otolaryngology. The \$10,000 Sheen Award, presented annually to a physician for scientific accomplishment, went to R. Lee Clark, MD, Houston, president of the U. of Texas System Cancer Center for his work with cancer. The \$5,000 Brookdale Award in Medicine was presented to Thomas E. Starzl, MD, professor of surgery at the U. of Colorado Medical Center, Denver, for his work in transplantation and other fields. Nathan J. Stark, Kansas City, Mo., senior vice president of Hallmark Cards, Inc., received the Citation of a Layman for Distinguished Service Award for his participation with the AMA in medical education activities. Philip H. Abelson, PhD, editor of *Science*, received the Scientific Achievement Award. The Joseph B. Goldberger Award in Clinical Nutrition "went to Robert E. Olson, MD, PhD, chairman and professor of biochemistry at St. Louis U. Medical Center.



SOME NEW APPROACHES TO OPHTHALMOLOGICAL PROBLEMS

Vision, one of our most cherished senses, is rarely regained once lost. A direct extension of the central nervous system, the eye has the same complexity of organization and inability to regenerate following damage. Early recognition and treatment of ocular disease remains the first line of defense against vision-threatening diseases. Fortunately, ophthalmology, like other branches of medicine, is experiencing a revolution in new diagnostic techniques and therapeutic modalities.

Long neglected as too rare and obscure for study, congenital malformations and hereditary degenerative disorders of the eye are receiving considerable attention at the University of Arizona Medical Center. Quantitative analysis and delineation of environmental hazards require careful monitoring of large populations. Under the direction of Dr. Harold E. Cross, endogenous populations with high rates of consanguinity (demes) are first identified as potential reservoirs of genetic disorders. To assist in data collection, a mobile unit with complete dual examination facilities and remote computer terminals is being developed for field work. Standardized computer records are being designed by Dr. James P. Ganley to facilitate retrieval of epidemiologically useful data for both immediate and longitudinal data studies. For genetic analysis and counseling, coded pedigrees are included with each record, together with linkage and chromosomal data.

Because many heritable disorders and malformations involve the posterior segment of the eye, where surgical management is not possible, in-

novative non-invasive techniques for diagnosis and therapy must be applied. For example, ultrasound has proven to be a useful method to delineate masses, foreign bodies, retinal detachments, tumors and even hemorrhage in the eye when the media are too opaque to visualize directly. Electrophysiologic retinal functions can be evaluated with the electroretinogram, electro-oculogram and the visually evoked response without altering normal ocular anatomy. Among other applications, these methods are useful for the detection of individuals who carry mutant genes, to ascertain traumatic or toxic damage to the retina, and to gauge the potential for useful vision following surgery. Most importantly, they often allow diagnosis long before clinical changes are apparent, thereby increasing the possibility of treatment before irreparable damage has occurred.

Among the more common degenerative ocular disorders, such as senile macular degeneration, central serous retinopathy, diabetes, and retrolental fibroplasia, it appears from recent evidence that the primary defect lies in the retinal and/or choroidal vasculature. In cooperation with Mr. Cliff Pollack of the Audio-Visual department, several advanced modalities of ocular photography have been developed to expand the diagnostic capabilities of the ophthalmologists. The availability of combined fundus photography and fluorescein angiography has vastly improved the resolution of subtle vascular defects, enabling the physician to pinpoint treatable lesions far more precisely. Through further modification of

the fundus camera, it is possible to record stereoscopically selected lesions during their evolution in order to evaluate the therapeutic efficacy of alternate modes of therapy. Periodic stereoscopic views of the optic disc, for example, allow far more precise determination of the progression of glaucomatous cupping than has been possible with memory or diagrams in the past. In the same manner, angiographic photos of the anterior segment such as the iris, cornea and conjunctiva can also be made.

Although treatment of many disorders is not yet available, evolving techniques hold promise. Most widely known is the use of photocoagulative or laser therapy for vascular lesions. Neovascular lesions of the retina such as is often seen in advanced diabetic retinopathy appear to benefit particularly from this mode of therapy although long term evaluation will be necessary before the indications and benefits are fully known. Mechanical vitrectomy holds great promise for selected opacifying disorders of the vitreous. Finally, but not least, application of modern microsurgical techniques is improving the prognosis and decreasing the frequency of complications in more common procedures, such as corneal grafts and cataract extractions.

These relatively recent technological developments illustrate some of the potential for the treatment of visual disorders that were considered hopeless even in the last decade. By extending the skill and diagnostic acumen of the ophthalmologist they offer hope to many threatened by blinding diseases.



*Clinical Oncology
In Arizona*

TREATMENT OF WILM'S TUMOR

This new section in Arizona Medicine is specifically targeted to the subject of cancer care in the state of Arizona. Recognition of the importance of cancer management has been underscored by the establishment of the conquest of cancer as a national goal. In this column, current concepts in cancer management and recent advances in cancer research that are relevant to Arizona, will be discussed each month. Cancer therapy is currently changing at an extraordinarily rapid rate, and the views expressed on this page should not be considered as static recommendations. The editors of this column will select key topics and invite interested physicians and allied health professionals from Arizona to write components related to areas of their expertise in cancer.

Editors: Paul H. Duffey, M.D., F.A.C.P., Hematology-Oncology, The Tucson Clinic, Tucson, Arizona 85716; Sydney E. Salmon, M.D. Professor and Head, Section of Hematology and Oncology, University of Arizona College of Medicine, Tucson, Arizona 85724; Robert H. Thoeny, M.D., Dir., Radiation Oncology, Good Samaritan Hospital, Phoenix, Arizona 85006.

DIAGNOSIS AND SURGICAL TREATMENT

DAVID S. TRUMP, M.D., M.Sc. (Surg.)
F.A.C.S., F.A.A.P.

DIAGNOSIS

Malignant neoplasms rank second only to accidents as the cause of death in infants and children up to 15 years of age. Wilm's tumor comprises some 6-8% of such neoplasms, and is the most common malignant renal tumor of childhood.

The average age of cases of Wilm's tumor is three years with a range from fetus to 80 years. Over 90% will appear before age six.

Sex distribution is equal, and left-sided lesions slightly outnumber right-sided ones. Parents give a history of noticeable abdominal mass in 60% of the cases. Pain occurs in one-fifth to two-thirds of the cases. Fever over 102°F, cystitis symptoms, and gastrointestinal upset are present in a few patients.

Ninety percent of the cases have a palpable abdominal mass. Hypertension is reported in varying degrees in as many as 60% of the pa-

tients and is not always relieved by nephrectomy. Certain congenital anomalies should increase the physician's index of suspicion for Wilm's tumor: hemihypertrophy, aniridia, and genitourinary anomalies.

A pre-operative IVP is mandatory and is done with 2 cc of 50% hypaque per kilo of body weight. Injection of the dye should be done in the femoral vein as a means of visualizing the inferior vena cava to establish whether or not this vessel is involved by tumor. The renal pelvis is usually elongated, distorted, and displaced medially and inferiorly. In approximately 10 to 15% of cases, calcifications will be seen. Only rarely are further contrast studies indicated.

Other laboratory examinations usually done consist of: CBC, urinalysis, electrolytes, BUN, creatinine, and VMA collections. Bone marrow examination for tumor cells is desirable but not mandatory. Hematuria, present in 15-20%, is an indication for cystoscopy to determine presence or absence of ureteral involvement. A relatively innocuous hypercoagulable state may exist with Wilm's tumor: in general, it requires no treatment.

Differential diagnosis include neuroblastoma, teratoma, and "congenital mesoblastic nephroma of infancy," a histologically benign tumor occurring in children under one year old and cured by nephrectomy alone.

SURGICAL APPROACH

Excessive palpation of these tumors pre-operatively and percutaneous needle biopsies should be avoided because of possible tumor dissemination. Large indwelling venous catheters are placed in both arms because of the possible necessity of cross clamping the inferior vena cava.

A generous transverse transperitoneal incision is made, and may need to be extended into the thorax for a large right upper pole lesion. The abdominal cavity is thoroughly inspected, especially the liver and periaortic nodes. Early identification and ligation of the renal artery and

vein is important. The latter is often flattened and stretched over the medial surface of large tumors. Because the tumor is bilateral in up to 10% of cases, the opposite kidney must be mobilized and inspected thoroughly anteriorly and posteriorly.

When the tumor is unilateral, the entire mass, including kidney, perirenal fascia, and fat, is removed intact. Any contiguous involved structures such as the tail of the pancreas, spleen, or diaphragm should be removed en bloc with the specimen. Occasionally small upper or lower pole tumors can be "shelled out" with tumor capsule dissected free. Every effort must be made to remove as much tumor bulk as possible even if distant metastases are present to afford greater success with post-operative radiotherapy and chemotherapy.

A thorough lymph node dissection from the diaphragm to the aortic bifurcation is mandatory: 35% of cases have metastatic tumor in one or more nodes, and staging is necessary to evaluate treatment programs.

Rarely pre-operative irradiation is indicated in a massive tumor to reduce tumor size but technical difficulties of nephrectomy are increased by doing so.

Bilateral Wilm's tumor is handled as follows: If one kidney is grossly involved and the other only mildly, a total nephrectomy is done on the worst side and a partial nephrectomy on the other. If bilateral partial nephrectomies are feasible, they should be done. If there is diffuse involvement of both kidneys, only biopsy should be done. All of these cases should receive radiation and chemotherapy post-operatively.

RADIOTHERAPY

ROBERT THOENY, M.D.

Pre-operative radiotherapy for Wilm's tumor is no longer widely practiced because of the necessity of establishing a tissue diagnosis by laparotomy and the increasing ability of well-trained surgeons to remove even large tumor

masses from infants without undue difficulty or risk.

Post-operatively, radiation therapy may be withheld in Group I patients under one year of age where the tumor is well differentiated, has been totally grossly removed surgically, and in which there is no microscopic evidence of capsule invasion or of regional or distant metastasis. This policy does not appear to demonstrably increase the incidence of local tumor recurrence or the subsequent development of distant metastases in these patients.

All other stages of disease should be considered for post-operative radiotherapy in conjunction with chemotherapy as soon as practical following surgery, ideally within 48 hours.

Table 1 Staging of Wilm's Tumor	
Stage I	— Tumor limited to kidney and completely resected.
Stage II	— Tumor extends beyond kidney but is completely resected.
Stage III	— Residual nonhematogenous tumor confined to the abdomen.
Stage IV	— Hematogenous metastases beyond Group III (e.g. lungs, liver, bone, and brain).
Stage V	— Bilateral involvement initially or subsequently.

The volume requiring treatment depends on the stage of disease, and must include all sites of known post-operative tumor residual and potential implantation. For the more limited tumors (Group II), the usual treatment volume includes the entire "renal bed" on the involved side, (i.e. from the diaphragm inferiorly avoiding the bony pelvis if possible) as well as adjacent para-aortic nodes across the midline but sparing the opposite uninvolved kidney. When there is known contamination of the peritoneal cavity due to tumor implantation or rupture at surgery (Group III), the entire abdominal cavity is at risk and must be treated with appropriate shielding of the liver, spinal cord, and uninvolved kidney. The recommended midplane tumor dose varies between 1800-4000 rads delivered at a rate of 1000-1200 rads per week, with total dose gauged to age of patient and volumes under treatment.

Table 2 Recommended Tumor Bed Dose — Wilm's Tumor (NWTSG)	
Age	Dose
Birth 18 mos.	1800-2400 rads
19-30 mos.	2400-3000 rads
31-40 mos.	3000-3500 rads
41+ mos.	3500-4000 rads

Group IV patients with hemotogeneous metastases deserve consideration for local radiotherapy to areas of symptomatic disease. Doses given

are in the order of 3000 rads in 3-4 weeks along with adjunctive chemotherapy.

Pulmonary metastases, which represent the most frequent distant spread of Wilm's tumor, have been successfully treated with combined radiation and chemotherapy. The irradiated volume must include the entirety of both lungs regardless of the nodules demonstrated radiographically. Dosage employed in conjunction with adjuvant chemotherapy is limited to about 1400 rads midplane given at 150 rads per day.

Bilateral Wilm's tumor (Group V) occurs in about 10% of cases and presents a difficult situation requiring especially close cooperation between surgeon, radiotherapist and pediatric oncologist. Our general rule for management is to follow partial nephrectomy with approximately 1200 rads to both kidneys in conjunction with chemotherapy and possibly a "second look" operation for local exsision of residual tumor. If nephrectmoy has been earried out initially on the most severely involved side, 1200 rads is given to both renal areas with boost to 2000-4000 rads to the post-nephrectomy renal bed.

Acute radiation side effects which may include nausea, diarrhea, leukopenia and skin reaction are well tolerated by most patients with modern supervoltage techniques providing daily dose increments are tailored to the volume under treatment. Delayed effects from radiation are an important consideration which must be fully discussed with the patient's family before therapy. It is essential that these sequellae be viewed within the context of an organized program designed to salvage the patient's life.

Skeletal growth disturbances can be minimized by careful shielding of treatment fields to avoid all possible bone growth eenters and to include bilateral epiphyseal centers of the vertebral bodies. Because of the possible lower threshold for radiation nephritis in children as compared to adults, total dose to the kidneys should be kept to approximately 1400 rads. Hepatic and central nervous system tolerance of about 3000 rads in four weeks must not be exceeded. Testicular shielding and surgical placement of ovaries outside treatment fields when possible materially reduces delayed radiation effects on these structures. Some degree of reduced muscle and soft tissue development in treated areas is generally not a problem of major proportion.

CHEMOTHERAPY

PAUL V. BARANKO, M.D.*

Along with acute lymphocytic leukemia, Wilm's tumor has shown the best improvement in survival curves in Pediatric Oncology during the past decade. Percent survival has risen from 20% ten years ago to 80% at the present time. The improvement can be attributed to better understanding of the tumor itself, and more aggressive management of the patient with regards to surgery, radiation therapy, and chemotherapy.

In 1969, the National Wilm's Tumor Study (NWTS) was organized with the objective to refine methods of therapy. The NWTS design was based on the staging listed in Table 1. The two questions to be answered by the NWTS were: 1) Is radiation (XRT) needed to the flank of a completely removed tumor, and 2) Is Actinomycin-D (AMD), Vincristine (VCR), or the combination of both better in the chemotherapy of Wilm's tumor? The chemotherapy schema for the NWTS was as follows:

Stage I	Regimen A - Surgery + AMD + XRT Regimen B - Surgery + AMD
Stage II & III	Regimen A - Surgery + AMD + XRT Regimen B - Surgery + VCR + XRT Regimen C - Surgery + AMD + VCR + XRT
Stage IV	Regimen A - Surgery + AMD + VCR + XRT Regimen B - Pre-op VCR + Surgery + AMD + VCR + XRT

In the above therapy schema, AMD is given at a dose of 15 micrograms/kgm IV, daily for 5 days, beginning on the day of surgery and repeated at 6 weeks, and 3, 6, 9, 12 and 15 months after surgery. For groups II and III, Regimen B, the Vincristine is given at the time of diagnosis then weekly for 7 more doses. The dose is 1.5 mg/M² IV. It is then given at 3 months post-operatively and every three months up to and including 15 months, giving two injections four days apart (e.g. Monday and Friday) in order to make the timing comparable to the AMD schedule. For groups II and III, Regimen C and stage IV, the AMD is given as in stage I. The VCR is given weekly starting on day 7 for 8 weeks. The sixth dose is given on the same day as the first of the five daily injections of AMD, administered at 6 weeks. Two doses of VCR are given every 3 months from 3-15 months, being given on the first and the fifth days of the AMD course.

Preliminary information⁷ at the present time

has shown that there is no difference in the recurrence of flank masses whether post-op radiation is given or not. The period of follow-up is still short and will require more time for valid analysis. The combination of VCR and AMD appears to have a synergistic effect with statistically significantly better results than either agent alone for both disease-free interval and survival.

Presently the format of the NWTS is undergoing revision. It appears that the vast majority of metastases occur within the first 9 months post-surgery, and that the recurrence rate drops off precipitously after that time. Proposed changes to be considered presently include:

- 1) AMD + VCR for 9 months
AMD + VCR for 15 months
- 2) AMD + VCR
AMD + VCR + Adriamycin

Adriamycin is a relatively new agent which has been shown to be effective in late stage Wilm's tumor patients whose disease is refractory to AMD and VCR.⁸

The progress in the evaluation of chemotherapy is primarily the result of joint efforts of institutions throughout the country. It is hoped that through programs such as the NWTS, the present survival statistics of

Stage I	90%
Stage II	80%
Stage III	60%
Stage IV	50%

can be further improved. The treatment for bilateral Wilm's (Stage V) must be individualized and requires aggressive management by the chemotherapist, radiation therapist, and surgeon.

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FOOTNOTES ON AUTHORS

DIAGNOSIS AND SURGICAL TREATMENT: David S. Trump, M.D., Head, Section Pediatric Surgery, Maricopa County Hospital, Office, 926 East McDowell Road, Phoenix, Arizona 85006.

RADIOTHERAPY: Robert H. Thoeny, M.D., Director, Radiation Oncology, Good Samaritan Hospital, 1033 East McDowell Road, Phoenix, Arizona 85006.

CHEMOTHERAPY: Paul V. Baranko, M.D., St. Joseph's Hospital and Medical Center, Phoenix, Arizona.

* Dr. Baranko is presently an independent investigator at St. Joseph's Hospital and Medical Center for the National Wilm's Tumor Study working in conjunction with Good Samaritan and Maricopa County Hospitals in Phoenix, Arizona.



PARACERVICAL BLOCK – A RECONSIDERATION

DONALD J. ZIEHM, M.D.

Since its introduction into clinical obstetrics in 1945, paracervical block anesthesia has received numerous favorable reports. In the last 10-15 years the technique has received widespread use and popularity. The ease of administration, rapid onset of action, and effective relief of pain seem to make this an ideal technique for use in labor.

However, no form of anesthesia is innocuous or without hazard. Numerous reports have appeared in the literature concerning undesirable effects on the fetus. It is no longer controversial that a paracervical block can be dangerous to the fetus. These problems have become increasingly more evident since the introduction of fetal scalp sampling and continuous electronic fetal heart rate monitoring.

CLINICAL PICTURE

The major difficulties encountered center around fetal bradycardia, intrapartum drop in pH, and rise in base deficit. The incidence of fetal bradycardia and acidosis after paracervical block (20-40% in some studies) has been shown to be related to the dose of the local anesthetic used, being greater when larger doses are used. The time of onset of bradycardia is commonly from 5-7 minutes after administration of anesthetic. Duration of effect is extremely variable, generally from 10-15 minutes. Significantly lower fetal scalp pH values occur if the bradycardia lasts longer than 10 minutes. A rise in base deficit can also be demonstrated with prolonged bradycardia.

Inspection of fetal heart rate tracings reveals no characteristic patterns. There is usually an increase in base line irregularity that signals the beginning of the reaction. An abrupt fall in the rate with possible loss of irregularity may then occur. As the fetal heart rate returns toward

normal, there is usually a recurrence of the increased irregularity, often followed by late deceleration and tachycardia. Figure 1 demonstrates the typical block bradycardia. On this tracing the uterine activity is poorly recorded. The effect of paracervical block on uterine contractions is variable. Increase, decrease, and no change in contractions have all been reported. Other fetal heart rate patterns may develop.

ETIOLOGY

The cause of fetal bradycardia is not clear. The most commonly held hypothesis is that the drug produces a direct depressant effect on either the fetal heart and/or the central nervous system. Fetal ECG patterns during bradycardia indicate a sinoatrial node suppression with a wandering pacemaker, suggesting a mechanism other than direct fetal ventricular myocardial depression. There are three possible routes through which the local anesthetic agent can reach the fetus: 1) direct injection into the fetus; 2) rapid absorption from the paracervical space into the maternal central circulation and across the placenta to the fetus; and 3) through a more direct route to the placenta via uterine arterial vessels either from the paracervical space or from the uterine wall into which the drug may have been inadvertently injected.

Local anesthetic agents are rapidly absorbed from the paracervical area and promptly cross the placenta to the fetus. Most studies report Apgar scores of 7 or greater at 5 minutes in infants born following paracervical block bradycardia. However, occasional case reports cite severely depressed infants when delivery occurs during a paracervical block reaction. The incidence of infant depression defined as time from delivery to sustained respiration is significantly higher following paracervical block bradycardia. Therefore, in cases in which spontaneous delivery occurs during bradycardia after paracervical block, neonatal signs of local anesthetic intoxication should be looked for. These include apnea, persistent bradycardia, flaccidity and convulsions in the first minutes of life. Local anesthetic agents given in excessive doses are known to cause convulsions and severe depression in newborn lambs.

RECOMMENDATIONS

Because of its potential hazards to the fetus, several guidelines are suggested regarding the use of paracervical block anesthesia:

1. The *smallest* amount of drug should be

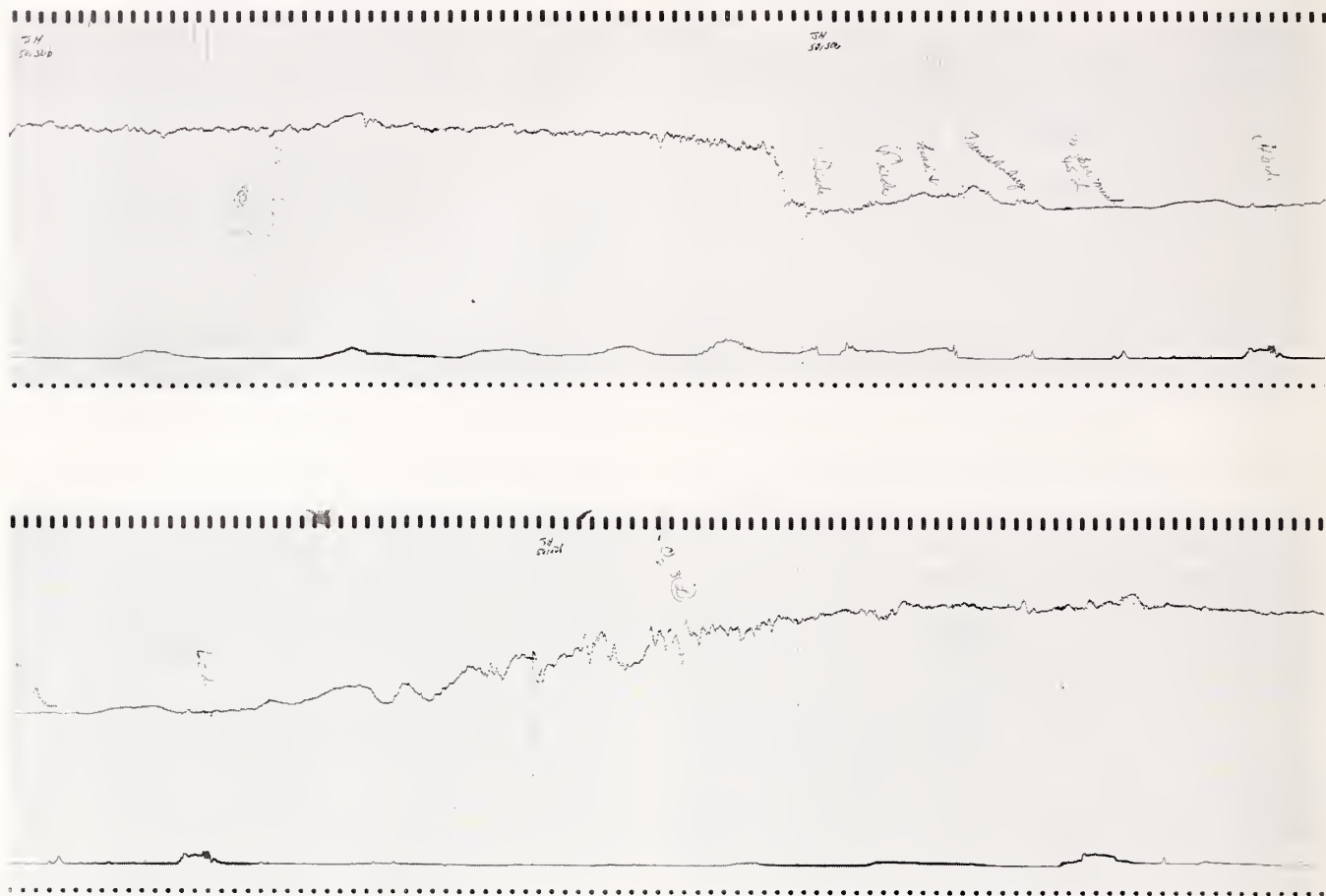


Fig. 1. Bradycardia following paracervical block. Paper speed — 3cm/min.

used, approximately 5 cc on each side of 1% Lidocaine or Mepivocaine.

2. Only the needle tip should be inserted into the vaginal mucosa so that a wheal may be palpated upon injection.
3. Dosage and concentration of the anesthetic agent should be recorded on the chart. This information may be helpful to the pediatrician if a bradycardia should occur.
4. Repeat blocks should be given with caution since accumulation of the drug in the fetus does occur.
5. Paracervical block should be avoided in cases associated with placental insufficiency in which the fetus is likely to be hypoxic or acidotic (toxemia, diabetes, prematurity; etc.) or with intrapartum distress. Fetal heart rate changes have been shown to occur more often if fetal distress has been present prior to the block, and in premature fetuses. The effect of local anesthetics is also potentiated in a more acidotic en-

vironment. Exceptions are possible if other anesthetic techniques are contraindicated or pose a greater hazard to mother or fetus.

6. Avoid delivery during a paracervical block bradycardia since the infant is likely to be depressed. The drug is rapidly cleared by the placenta with the fetus in-utero.
7. If possible, direct and continuous fetal heart rate monitoring should be used. If not available, auscultation of the fetal heart rate should be performed at 5-minute intervals during the first 30 minutes after a block.

A major concern to obstetricians and perinatologists is the seeming compulsive use of paracervical block anesthesia. Certainly its effectiveness for pain relief is unquestioned. But we should not allow our emphasis on maternal analgesia to cause us to injudiciously administer an agent that may potentially endanger the fetus. The use of an alternate method of analgesia should be considered if delivery is anticipated within 30-45 minutes.

Bibliography furnished upon request.



JAMES L. SCHAMADAN, M.D.



*Department of
Health Services*

On January 1st of this year a new Department of Health Services was created by legislation. The objective was to absorb seven* independent state health-related agencies and reorganize them into one consolidated department. In the process, the administrative policy and decision-making Boards and Councils that previously existed between the Governor and the Chief operating officers of the agencies, were eliminated. The Director of this new Department, (me!) is directly accountable to the Governor.

As of 1 July, the reorganization/integration was complete and the Department of Health Services was launched as the State's major health agency.

The new Department of Health Services has the potential to be of even greater service to Arizona. We provide some direct health care services in the State Hospital, and the Children's Hospital. We contract or subvent for a vast array of services from the private sector and we help support other services thru county health departments. We have significant programs in planning, health industry affairs, environmental health services, education, and public information. The preceding outline of our evolution and the inventory of our services is intended to introduce the readers of *Arizona Medicine* to the new Department of Health Services and to emphasize the fact that DHS is also in the health care business.

I'm grateful to the Arizona Medical Association leadership to develop a continuing future relationship between ArMA and the DHS. The current issues which we feel will have the most significant mutual impact are Medicaid and Health Planning (specifically, the development of the often-controversial Arizona Plan for Health Services).

ArMA's Medicaid Committee is headed by Dr. Wallace Reed. Dr. Reed and Mr. Mack (the Deputy Director of DHS under whom the Medicaid program will be developed) have already met to develop that relationship. The ArMA Medicaid Advisory Committee will be formed, staffed and ready one week **before** this Department officially begins working on the program. Dr. Lou Kossuth (who now heads our Planning and Research Division) has taken the Arizona Plan for Health Services back into the OR for what may be a major reconstruction. Dr. Richard O. Flynn is one of several ArMA consultants on that case.

Next month I'll try to update you on paramedics, milk inspection, and—for the more lusty reader—a word or two about nitrogenous (as distinguished from nocturnal) emissions.

*Arizona State Department of Health
Arizona Health Planning Authority
Crippled Children's Services
Arizona State Hospital
Arizona Pioneers' Home
State Hospital for Disabled Miners
Anatomy Board

STUDENT LOAN FORGIVENESS

Under the provisions of the Health Professions Act of 1966 and the Comprehensive Health Manpower Training Act of 1971 a Federal program was established to provide forgiveness or partial cancellation of loans that had been made, if as a physician they practiced in designated shortage areas. The Department of Health Services furnishes information to applicants for loan forgiveness. Inquiries should be addressed to Louis C. Kossuth, M.D., Assistant Director for Planning and Research, Arizona Department of Health Services, 1740 West Adams, Phoenix, Arizona 85007. The following are the presently recognized shortage areas in Arizona.

1. Practicing in the following Indian Facilities:	
Facility	County
Teec Nos Pos	Apache
Chinle Health Center	Apache
Many Farms School Health Center	Apache
Lower Greasewood School Health Center	Apache
Fort Defiance Hospital	Apache
Toyei Health Center	Apache
Tuba City Hospital	Coconino
San Carlos Hospital	Gila
Peach Springs Health Center	Mohave
Whiteriver Hospital	Navajo
Keams Canyon Hospital	Navajo
Kayenta Health Center	Navajo
Shonto School Health Center	Navajo
Winslow Hospital	Navajo
Sells Hospital	Pima
Santa Rosa Health Center	Pima
San Xavier Health Center	Pima
Saeaton Hospital	Pinal
Parker Hospital	Yuma

2. Additionally, the following are recognized as shortage areas:

Shortage	
1	Puerco and St. Johns census subdivisions of APACHE COUNTY
5	Benson and Tombstone census subdivisions of COCHISE COUNTY
1	Bowie census subdivision of COCHISE COUNTY

1	Elfrida census subdivision of COCHISE COUNTY
2	Coconino subdivision of COCONINO COUNTY excluding areas within a 20 mile radius of Flagstaff or Sedona
1	Kaibab census subdivision of COCONINO COUNTY and North census subdivision of MOHAVE COUNTY
1	Globe census subdivision of GILA COUNTY
1	Winkelman census subdivision of GILA COUNTY
1	Pima census subdivision of GRAHAM COUNTY
1	Gila Bend census subdivision of MARICOPA COUNTY
1	Buckeye census subdivision of MARICOPA COUNTY
2	Phoenix — MARICOPA COUNTY — Community Health Network
2	Kingman South subdivision of MOHAVE COUNTY
3	Little Colorado census subdivision of NAVAJO COUNTY
1	Snowflake census subdivision of NAVAJO COUNTY
	PIMA COUNTY — Marana Community Clinic
1	Casa Grande and Maricopa-Stanfield census subdivisions of PINAL COUNTY
4	Eloy census subdivision of PINAL COUNTY
4	Superior Ray census subdivision of PINAL COUNTY
1	Ashfork census subdivision of YAVAPAI COUNTY
1	Congress census subdivision of YAVAPAI COUNTY
2	Humboldt and Verde census subdivisions of YAVAPAI COUNTY
2	Parker census subdivision of YUMA COUNTY
1	Welton census subdivision of YUMA COUNTY

MOSQUITOES: A PUBLIC HEALTH THREAT IN ARIZONA?

JOHN L. McDONALD

JAMES D. LANG

G. S. OLTON

The authors tabulate the presence of 19 species of mosquitoes in Arizona representing five genera. Seventeen are reported as having varying capacities for transmitting five encephalitides. One is a proven vector of malaria, and two transmit malaria under experimental conditions.

Arizona is visualized as open dry land with vast stretches of sand, mountains, and cactus. What is not readily apparent in this landscape are innumerable mosquito breeding sites. These sites range from snow pools in the forested upper elevations to tailwater accumulations in the irrigated agricultural areas of the lower desert. Urbanization of large portions of Arizona has also dramatically increased localized mosquito intensities through the creation of sewage oxidation ponds for human waste disposal. Standing water, especially in horse watering troughs, is often neglected and provides mosquitoes a favorable site for reproduction.

At least 43 species of mosquitoes are known to exist in Arizona (McDonald et al., 1973). These 43 species are members of 8 genera and demonstrate not only great variation and adapt-

ability, but also provide a diverse vector population for mosquito-borne diseases.

Table I gives the names of 19 species of mosquitoes that are potential vectors of human disease in Arizona. Of these 19 species, 17 have been reported to have varying capacities of harboring or transmitting five of the more important human viral encephalitides. Hess and Beadle (1959) have pointed out that, "the encephalitides now comprise the most important vector disease problem in the United States and Canada."

Based on these reports, it is the authors' opinion that the mosquitoes of Arizona do constitute a threat to the residents of the state. Increased emphasis on mosquito control throughout Arizona is justified from a public health as well as a pest control point of view.

1. University of Arizona Agricultural Experiment Station Journal #2214.

2. Grad. Student, Department of Entomology, University of Arizona.

3. Asst. Professor and Asst. Entomologist, Department of Entomology, University of Arizona.

From: U of A Agricultural Experiment Station Journal #2214; (Grad. Students, Dept. of Entomology, Mr. McDonald, Mr. Lang); (Asst. Professor & Asst. Entomologist, Dept. of Entomology U of A, Mr. Olton).

TABLE 1. ARIZONA'S MOSQUITO VECTORS OR POTENTIAL VECTORS OF HUMAN DISEASES^a

SPECIES	ENCEPHALITIDES ^b					MALARIA	REFERENCE
	A	B	C	D	E		
<u>Aedes</u>							
<u>dorsalis</u> (Meigen)			N		N		1, 1
<u>nigromaculis</u> (Ludlow)			X				2
<u>sollicitans</u> (Walker)	X		X	P?			4,4,8
<u>taeniorhynchus</u> (Wiedemann)	X			P?			4,8
<u>trivittatus</u> (Coquillett)					N		1
<u>vexans</u> Meigen	X		P				4,5
<u>Anopheles</u>							
<u>barberi</u> Coquillett						X	1
<u>freeborni</u> Aitken			N			P	1,1
<u>pseudopunctipennis</u>							
<u>franciscanus</u> McCracken						X	1
<u>Culex</u>							
<u>coronator</u> Dyar & Knab		P?					5
<u>nigripalpus</u> Theobald	N	P	X	P?			6,6,2,5
<u>peus</u> Speiser			N				6
<u>pipiens</u>							
<u>quinquefasciatus</u> Say		P	N				6,6
<u>restuans</u> Theobald			N				1
<u>tarsalis</u> Coquillett			N	P	N		1,6,1
<u>Culiseta</u>							
<u>incidens</u> (Thomson)	X	X	X				4,1,1
<u>inornata</u> (Williston)	X		N				4,1
<u>Psorophora</u>							
<u>confinnis</u> (Lynch-Arribalzaga)				P?			8
<u>discolor</u> (Coquillett)				P?			8

^a P - Proven vector
P? - Probable vector
N - Found infected in nature
X - Transmits under experimental conditions.

^b A = Eastern Equine; B = St. Louis; C = Western Equine; D = Venezuelan Equine;
E = California

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ArMA
Medical History

THE PERILS OF PUBLIC HEALTH



BY DRY GULCH JAKE

Yes, Marion Sprague your carefully collected collection of historical data relating to the development of the Public Health Department together with the early letters and records of the Arizona Department of Health, and the State Health officers; yes Marion these have been preserved and they are attended by Mildred Rambaugh of the Vital Records Department of the new Department of Health Services. Marion came to the

department when there were only five other employees in 1931 and closed her desk in 1964. *Arizona Public Health News*, an intramural publication, devoted a considerable portion of the 1964 number to appreciation of Marion's service to the State.

It was Mrs. Sprague, to whom the then Commissioner of Health, Dr. Salsbury, referred this inquiring eye when I wondered if there was any historical material in the state health departments archives from the early days. Indeed there was, Mrs. Sprague was most helpful in demonstrating it to me, it has been added to and is a tribute to her early guardianship.

Dr. Louis C. Kossuth, who was the last Commissioner of Health for the State before the latest reorganization, now moves over to a planning section. Dr. Kossuth is also mindful of the value of historical treasure and has kindly lent his support and assistance in further care and collection for these departmental archives.

Now a new director of the department of Health Services assumes the hot seat and it is none other than the Flying Doctor Bioengineer, James L. Sehamadan. The names change but there is a fair possibility that some of the problems will remain the same.

The original territorial Board of Health was created March 19, 1903 by the 22nd Territorial

Assembly. John R. Whiteside, a member of the council and representing Mohave County, introduced the bill which began the establishment of the Territorial Board of Health, county and city boards of health and regulating the record of vital statistics. The Territorial Board of Health made the governor president, the attorney general, vice president and a practicing physician of the territory was chosen to be the secretary.

Many of the letters written to Dr. Lonney, Secretary Board of Health 1912-15, are preserved. Unfortunately, almost all the answers, usually sent from his office in Prescott where he enjoyed a busy private practice, were destroyed.

When Dr. R. N. Looney (Arizona license #15, 1903) of Prescott was the State Superintendent of Health, he received some fascinating letters by Dr. L. L. Miner (Arizona license #316) County Superintendent of Health, practicing in Bisbee, Arizona.

These letters are fascinating because they delineate the epidemiology of an outbreak of smallpox, his attempts to control it and largely defeated by public opinion apparently egged on by some competitive physicians in the adjacent city of Douglas. The first letter was dated March 9, 1912 and parts of it read as follows:

"Unintentionally I have been guilty of neglecting some of the duties of my office, i.e. in reports to you of vital statistics in contagious diseases. It was some days after my appointment before I was notified to proceed, my predecessor passed his duties to another, who in turn deputized another, and the last officer can give me no books for recording statistics—hence, with apologies for delay, I must appeal to you and request the necessary books. (It appears Dr. Miner booked out on that one.)

"In accordance with my telegram I shall try to acquaint you with information about smallpox at Douglas (which I am advised you have received from Dr. Green, Deputy Health Officer Protem) but also with the general pulse of public sentiment.

"January 17th, the proprietor of the Mission House, also a truant officer and a Salvation Army Officer (holding weekly services at the County Hospital) displayed an eruption of smallpox. Case reported to the Health Department at Douglas, January 20th. During the interval he was visited by many people including the two Salvation Army girls. He was removed to the De-

tention Hospital, his house quarantined, fumigated, guests vaccinated and observed fourteen days. No other cases. Quarantine raised. At this time a dress-maker who had been visited by Salvation Army girls, had a light case of smallpox and was quarantined in residence with husband. No case from this time until February 26th, when other cases appeared which I am informed you are aware of in their sequence.

"One case, on account of public criticism, should be presented to you. February 14, the traveling man developed, at the hotel, an eruption resembling smallpox and was removed to the Detention Hospital. He gave a history of receiving 606 January 6th, (this was a form arsenical used in the treatment of syphilis) three days after detention eruption appeared apparently syphilitic and was so pronounced by four able physicians. Clothes were fumigated, and was dressed in sterile gowns and was removed to the County Hospital, dead two days later. His undertaker, Mgarty, developed smallpox seven days later. Of three undertakers who developed smallpox, one died.

"On account of the removal of this patient, and the published information, the public at once accepted this as the source of the disease and severe public criticism resulted. The above facts were dictated to me by Dr. Greene. Should this case have been smallpox as suspected on account of the undertaker contracting smallpox, possibly 606 may have had some influence in masking its symptoms.

"Immediately after taking this office I went to Douglas, to request the closure of the schools. Bitter resistance was encountered from some of the school board and among the bitterest was Dr. Wright. Their chief argument against this measure was that it would hurt the town as it would then admit that there was smallpox prevalent and it had been present in the most dangerous places, namely laundry wrappers, drivers, butchers, and three undertakers, and other citizens, including boarding house proprietors, all totaled eleven Americans and two Mexicans.

"Bitter criticism was rife then, yet they were loath to take even the first protective measures. The following night the District Attorney and myself thought best to close theaters and churches."

"It would require too much space to attempt to acquaint you with the apparent and unneces-

sary jealousy between these two towns, mutually dependent upon one another but jealousy evidently exists. Whether or not the fact that this office has fallen to Bisbee for the first time has been the cause of any increased jealousy to Douglas, I am unable to state, but I can state that the suggestion of the ordinary protective measures, ordinarily instituted by the average incorporated town on its own initiative, have invariably met with resistance.

"The epidemic originated in dangerous sources, laundry for one and they permitted laundry to be shipped to outside towns after the outbreak of the epidemic.

Until last night that is for the past three days, conditions seemed hopeful. Three cases and one death is a history of yesterday. The driver of a coal and wood wagon is one of the cases and while not certain I think the other is a driver also. The third developed in the hospital."

He then goes on to further state that in spite of his best efforts there is still a continued resistance on the part of the people in Douglas to accept full quarantine measures.

Dr. Minor felt so alarmed about the possibility of further spread of the disease in each city that he requested, "If quarantine is necessary we would be in a stronger position to do so with less damage to already strained relations, by having your advise or even your presence. The results of the next few days may decide the matter on which course to consider best."

On March 15th, only four days later Dr. Minor wrote to Dr. Looney "last night Douglas reported one dead, a driver ill for six days, another case not expected to live but tonight he was reported better. Today a new case developed in a Negro woman, released from the County Hospital fourteen days ago. Since then she has been circulating at liberty.

He reported "for two days the Douglas Postmaster has sent mail in a pouch against advice and request of the Health Board. In view of reports, requests and telegrams and a fresh case at **large** in Douglas, I can see no other recourse but to declare against their mail until the postmaster shows willingness to assist rather than resist protective measures along with disobeying postal orders." (Further on he delineates that it was the custom in those days to fumigate mail by making holes in the envelopes and I presumed fumigating with formaldehyde fumes, although it isn't stated just what fumigant was used.)

There is a copy of a letter signed by F. B. King, Superintendent, Western Division EP & SW Railroad, to the agent at Douglas, Arizona and it is interesting in that it goes into more detail about the method of fumigating.

"Pursuant instructions from the County Superintendent of Health effective at once, all freight other than perishables originating at Douglas, must be fumigated before being forwarded; and in order to do this a solution of 10 ounces of formaldehyde and 5 ounces of potassium permanganate will be used for each car of merchandise loaded at Douglas. This mixture is in the above proportions, it is to be placed in a porcelain, stone or tin receptacle and placed in the car merchandise after it is loaded and the doors immediately closed and sealed."

He further gives explicit directions about how the baggage room, the waiting room and the entire station is to be fumigated on the close of each day.

Dr. Looney apparently had concern about the necessity of absolute quarantine measures in Douglas so he did go to visit the area, but he had in the meantime prepared himself with authority from Governor Hunt, which would make it possible for him to declare Marshall Law and shut up the town quite tight if there was any resistance from the authorities, the local authorities at Douglas.

Well when they were eyeball to eyeball, that is when Dr. Looney and Dr. Miner were eyeball to eyeball with the city authorities in Douglas the latter were convinced that whether they agreed or not there was going to be quarantine measures instituted and so it was.

Later correspondence from Dr. Miner indicated that the epidemic began to simmer off but as late as May 19, 1912 he reported that another case of smallpox appeared, a pressman for the newspaper became ill on May 9th, and in consultation with three other physicians it was agreed he had typical smallpox, so that quarantine measures were strictly invoked and enforced again.

As you leaf through these old records it is evident that smallpox was present almost every year in some portion of the State in those early days, together with typhoid fever, scarlet fever and diphtheria.

But it was due to the alertness, and the clinical competence of these practicing physicians that these diseases were kept under control.



Bledsoe, N. D.....	1876-1974
Detjen, Edward D.....	1907-1973
Gindhart, Floyd D.....	1907-1973
Kiel, Lee Herman.....	1892-1974
Munger, Elbert E., Jr.....	1898-1973
Nichols, Dean.....	1914-1973
Ovens, James M.....	1913-1974
Sebald, John R.....	1937-1974



THE MINUTES APPEARING IN THIS SECTION HAVE BEEN EDITED TO CONSERVE SPACE. A COMPLETE COPY OF THE MINUTES OF ANY MEETING WILL BE MAILED TO ANY MEMBER REQUESTING THEM.

EXECUTIVE COMMITTEE

The meeting of the Executive Committee of the Arizona Medical Association, Inc. held at 810 West Bethany Home Road, Phoenix, Arizona on Saturday, June 15, 1974, a quorum being present, convened at 10:21 a.m., William G. Payne, M.D., President and Chairman presiding.

MINUTES

The minutes of the meeting held April 23, 1974 were approved as distributed.

TRAVELERS LOSS PREVENTION PROGRAM

Mr. William Luby and Mr. Wayne Tilford reviewed the suggested procedure for handling "underwriting review" and "claims review" and agreed upon the following procedures for handling claims review.

1. All files upon which a request for peer review is made by the Travelers Indemnity Company for claim purposes will be forwarded to the Arizona Medical Association Executive Director. Each file will be clearly stamped "Claim Medical Review."
2. The Executive Director will forward the file to the chairman of the Executive Committee stating the purpose of the review.
3. The Executive Committee will refer the claim file to a case manager, preferably one having the same specialty as the insured and one practicing within the same community as the insured.
4. The case manager will review the file and upon concluding his investigation will report to the Executive Committee in person. At this meeting the case manager will review his conclusions with the Executive Committee and solicit their assistance, if needed, in open discussion of the claim.
5. A representative of the Travelers claim department will be present at the time the case manager makes his presentation to the Executive Committee.

6. Following the presentation, a summarized oral opinion will be given including a definite statement indicating a **medical opinion** as to whether the insured did or did not practice good medicine under the circumstances related in the alleged incident.
7. The complete claim file will be returned to the Travelers claim representative at the close of the meeting.

It was determined that the Board of Directors should be asked to designate the Executive Committee to carry out the review functions as outlined above as well as authorizing it to expend funds received from the proposed service contract.

BOMEX LEASE

Mr. Robinson reported that an increase in rent has been built into the renewal portion of the lease taking effect 7/1/74—RECEIVED.

TRAVEL TOURS

IT WAS MOVED AND CARRIED TO LEAVE THE DECISION OF WHICH AGENCY WE UTILIZE FOR FUTURE TOURS TO THE EXECUTIVE DIRECTOR. IT WAS ALSO AGREED THAT MR. ROBINSON AND HIS WIFE ARE TO PARTICIPATE IN THE AFRICA TRIP PLANNED FOR EARLY 1975.

AD HOC COMMITTEE ON PHYSICIAN REHABILITATION

The question of having a female physician serving on the subject committee was reviewed and the following names were recommended:

- Pearl M. Tang, M.D.
- Eleanor A. Waskow, M.D.
- Suzanne E. Dandoy, M.D.
- Helen Johnson, M.D.

BOARD OF DIRECTORS AGENDA REVIEW

The committee reviewed the Board of Directors agenda for the 6/15/74 meeting and made numerous suggestions.

OTHER BUSINESS ARIZONA DEPARTMENT OF EDUCATION

The request for nominations to the Arizona Department of Education's special education committee was discussed and the following names suggested as possible nominees:

1. Robert F. Crawford, M.D.
2. Joseph C. Heinlein, M.D.
3. Clarence R. Laing, M.D.
4. Harvey G. Goodman, M.D.
5. Richard G. Curless, M.D.
6. John K. Kerr, M.D.

BOARD OF DIRECTORS INVITEES

It was determined to include Neil Vanselow, M.D., Dean, College of Medicine on the list of regularly invited guests to the Board of Directors meetings.

BOMEX SUGGESTED CHANGES IN THE LAW

Richard L. Dexter, M.D. discussed several ideas relating to changes in the medical practice act. It was determined that the suggested changes be reduced to writing and submitted to the Legislative Committee for review.

Meeting adjourned 12:22 p.m.

William E. Crisp, M.D.
Secretary

PUBLIC RELATIONS COMMITTEE

The meeting of the Public Relations Committee of the Arizona Medical Association, Inc., held at 810 West Bethany Home Road, Phoenix, Arizona on Friday, June 14, 1974, convened at 7:21 p.m., William C. Scott, M.D., Chairman, presiding.

MINUTES

The minutes of the meeting held June 14, 1973, were approved as distributed.

1974 ANNUAL MEETING P.R. ACTIVITY REPORT

Mr. Robinson and Mr. Petersen reviewed the 1974 Annual Meeting Public Relation Program as follows:

Public Relations activities surrounding the 83rd Annual Meeting of the Arizona Medical Association focussed on news media coverage before (Phase I), during (Phase II) and after (Phase III) the April 23-27 events. Addendum items to this report are:

- A listing of major press releases and accompanying photographs prepared by the agency;
- A binder containing copies of the releases and photo captions, plus actual clippings supplied by our clipping service.

It should be understood that all newspaper and magazine coverage of the Annual Meeting is not included among the clippings in addendum item #2, due to the somewhat limited number of subscriptions taken by the clipping service, as well as possible oversights on their part. The clippings, however, generally reflect the scope and quantity of press materials utilized by print media throughout the state.

PHASE I

Preparation for news media coverage of the Annual Meeting began in early March. It included correspondence, telephone and personal contacts, and the drafting of press releases, fact sheets and schedules geared to the exacting needs and interests of each individual news media outlet. Simultaneously, speakers and special guests at the Annual Meeting, and representatives of specialty societies and the Woman's Auxiliary were contacted to align interview and photo sessions with specific news media personnel.

Largely based on the sound rapport built in recent years between the Association, its members and staff, and the news media, interest and total cooperation were secured from virtually all news media personnel contacted. The extent of print and broadcast media exposure gained before, during and after the Annual Meeting evidence this wholly supportive attitude, as well as the quantity of preparatory scheduling arrangements undertaken by the agency.

PHASE II

News media coverage immediately prior to and during the Annual Meeting is outlined below:

April 13-22 — Extensive statewide use by print and broadcast media of information provided in fact sheets and press releases concerning overall annual meeting and Auxiliary activities. Special mention should be made of the coverage provided by the Arizona Republic, Phoenix Gazette, Arizona Daily Citizen, Tucson Daily Star, KTAR television (Phoenix), KOLD-TV (Tucson), the Associated Press; KOY, KTAR, KNIV and KOOL radio (Phoenix),

KCUB, KAIR and KCEE radio (Tucson), and of Auxiliary activities by the Scottsdale Daily Progress.

April 23 — Appearance of Dr. Payne and Dr. Todd on KTAR-TV program "Today in Arizona";

- News conference conducted by Dr. Todd attended by representatives of nine broadcast and print media;

- Following the above, Dr. Todd was individually interviewed by KPHO-TV, KTAR-TV, KTVK-TV, KTAR radio, Dennis Farrell of The Phoenix Gazette, KOOL-TV, and Julian DeVries of The Arizona Republic. Resulting coverage was aired during 6 and 10 p.m. news broadcasts by the four television stations, in the following day's newspapers' editions, and throughout the day by KTAR radio;

- Live 20 minute interview of Dr. Todd by KPHX radio. Tape recorded excerpts from the interview were used on news broadcasts by KPHX during the following three days;

- Interview and photos of Woman's Auxiliary officers by The Arizona Republic. Coverage appeared in April 30 edition;

- Live 5 minute interview of Dr. Todd by KOOL radio;

- Preparation, and local hand delivery mailing (state-wide) of press release on installation of officers and the House of Delegates, highlight of speeches of Dr. Todd and Dr. Payne;

- Special telephoned report to The Phoenix Gazette on activities during House of Delegates session;

- Coverage of House of Delegates session by the Arizona Republic.

April 24 — Coverage of the breakfast panel program entitled "The Physician as an Individual and Parent" by reporters from the Phoenix Gazette, The Arizona Republic, KTAR radio;

- Live 25 minute interview of Dr. Payne by KPHX radio. Taped excerpts used on newscast for next two days;

- Taping of 30 minute interview of Dr. Payne and Dr. Armstrong at KTAR-TV. The program was broadcast on Sunday, May 5;

- Coverage (and photography) of Past Presidents' Luncheon;

- Interview of Dr. Payne by KTAR-TV. Filmed report used on 6 and 10 p.m. newscasts.

April 25 — Telephone report on scientific sessions' activities to KOOL and KXIV radio. Substantial use was made of this information;

- Personal coverage of breakfast panel program entitled "Current Arizona Legislative Matters Affecting Medicine" by reporters from the Arizona Republic, The Phoenix Gazette, Arizona Daily Star, Tucson Daily Citizen;

- Interview of Dr. Fred Herzon by Dennis Farrell of The Phoenix Gazette;

- Interview of Dr. Payne by KTVK-TV. The filmed report was broadcast during 6 and 10 p.m. news on April 25, and the morning newscast on April 26;

- Interview of Dr. Larry L. Morgenstern by Kathleen McDonald of Arizona Daily Star;

- Preparation and distribution (hand-delivered locally and mailed statewide) of press releases on scientific sessions held April 24 and 25. Releases were culmination of staff coverage of 13 different sessions.

April 26 — Interview by reporters from Arizona Daily Citizen and Tucson Daily Star of Tucson Medical Center physicians sponsoring winning exhibit;

- Interview of Dr. Raymond C. Doberneck and Dr. Russell D. Snyder by KOOL radio;

- Coverage (and photographs) of luncheon meetings of four specialty societies;

- Coverage of presentations made during President's Banquet by reporters from Arizona Republic, Arizona Daily Citizen and Tucson Daily Star;

- Telephone report to The Associated Press, United Press International, and The Scottsdale Daily Progress on presentations made during President's Banquet;

- Interview of Dr. Robert Oliver by Dennis Farrell of The Phoenix Gazette;

- Interviews of Dr. Ahrens and Dr. George D. Commerci and Dr. Phillip E. Dew by Marilyn Drago of Physicians Radio Network;

- Interview of Dr. Ben Cummins by Dennis Farrell of The Phoenix Gazette;

- Coverage of Woman's Auxiliary Luncheon for Arizona Living Magazine, The Arizona Republic, The Phoenix Gazette;

- Coverage of breakfast panel program on PSRO by reporters from The Arizona Republic, Phoenix Gazette, Arizona Daily Citizen, Tucson Daily Star;

- Interview of Dr. Henry Simmons by Julian DeVries of the Arizona Republic;

- Coverage of session on Physicians' Unions by Arizona Republic, Arizona Daily Citizen, Tucson Daily Star. Special telephoned report on session to The Phoenix Gazette, KTAR, KOOL radio and to KPHO, KTVK and KTAR-TV;

- Interview of Dr. Vol Philips by Julian DeVries of Arizona Republic.

April 27 — Telephoned report to Phoenix Gazette on awards presented at President's Banquet;

- Coverage (and photographs) of luncheon meetings of two specialty societies;

- Coverage of House of Delegates session by reporters from The Arizona Republic, The Phoenix Gazette, Arizona Daily Star, Tucson Daily Citizen;

- Highlights of session telephoned to The Associated Press, United Press International and television stations KTAR, KOOL, KTVK and KPHO;

- Interview of Dr. Scott by Kathleen MacDonald of Arizona Daily Citizen;

- Press release prepared and mailed statewide on PSRO and Medicaid stances taken by House of Delegates.

PHASE III

Post-event coverage mainly resulted from the quantity of press releases and captioned photographs provided to print media by the agency. Since the Annual Meeting greatly serves to spark media interest in pursuing medical topics throughout the year, continuing follow-up correspondence and contacts are and will be ongoing. (See addendum item #2 for release drafts, photos and resulting clips.)

A quantity of materials encapsulating highlights of the Annual Meeting was also provided to national publications, whose use of the articles will not be known until Summer due to their advance deadlines on monthly printing schedules.

SUMMARY:

The overall commercial value of the time and space, confirmed to date, provided by the news media is:

Television.....	\$46,215.00
Radio.....	10,465.00
Newspapers.....	7,895.00
Magazines.....	—
TOTAL.....	\$64,575.00

The \$64,575.00 figure compares with an exposure dollar value of \$59,504, gained as a result of the 1973 Annual Meeting. The slight gain was realized despite a substantial reduction in newspaper lineage this year, which was unquestionably the result of two factors: 1) the increased price and scarcity of newsprint, which has yielded less available newspaper space; and 2) the comparative lack of topics of "general public interest" explored during the scientific sessions, compared with discussion topics presented in previous years. Out-growths of the more technical topics from this year's Annual Meeting, however, should be seen in future months as reporters find opportunities to utilize the background information they have already absorbed.—RECEIVED.

1973-74 REVIEW OF P.R. PROGRAM

A review of 1973-74 public relations activities of the Arizona Medical Association indicates significant achievement in pursuit of our objectives. These major objectives, which should remain as our focus for 1974-75 activities are:

- 1. To express the Association's sincere concern for the health and well being of Arizona residents; and the quality, availability and costs of the medical services they are receiving.
- 2. To underscore positive aspects of the medical profession, and the true professionalism of Association members.
- 3. To gain public awareness of the Association's position on various medical and health related issues; and to fully explain the basis for these opinions.
- 4. To respond to criticisms of organized medicine and of Association supported issues that are challenged.

The following vehicles of communication are suggested as the best means to achieve these objectives:

- 1. Continuation of "Health Matters" newspaper column, which is currently being printed in 22 newspapers throughout the state. Additional newspapers will be reapproached to solicit their use of the column.
- 2. Exploration (detailing projected use, costs and logistics) of producing the same or similar "Health Matters" material as tape recordings for use by radio stations throughout the state.
- 3. Continuation and possible expansion of the "Medical Opinion" television program currently being broadcast the fourth Saturday of every month by KOOL-TV (Chanel 10) in Phoenix. Viewer and station personnel response to the program has been outstanding since the program was initiated last January. Statistics indicate the program has the largest audience during the time period. Based on this success, KOOL-TV is highly receptive to the

Association's planning and coordination of additional programming during the coming year.

- 4. Increased newspaper publicity. Continued close interaction between agency personnel and ArMA officers and staff members will assure prompt dissemination of all newsworthy information about ArMA activities and opinions on health care issues. The agency's tenure-enhanced rapport with news media personnel covering the health care field is expected to yield even greater levels of cooperation and lineage in the coming year. Press releases will focus on activities throughout the year to fully express the practices and philosophy of ArMA.
- 5. Increased broadcast media exposure. The coverage gained by press releases sent to broadcast media is equal to, or often in excess of, newspaper lineage resulting from the same releases. Broadcast media coverage, therefore, will increase in the same proportion with newspaper coverage. In addition to pursuing radio stations' use of "Health Matters" (or similar) material, additional efforts will be made to gain greater broadcast media exposure through the scheduling of guest appearances on regular television and radio programs, and arrangements for TV and radio "specials".
- 6. Continued coordination of radio and television stations' use of national tapes, films and program series. These include use of the "Ounce of Prevention" television series produced by the American Academy of Pediatrics (first eight in series broadcast last Fall in Phoenix, and is currently being broadcast in Tucson), and "public service" television and radio announcements provided by the American Medical Association. Films produced by the A.M.A. and national specialty societies will also be promoted.
- 7. Preparation of materials updating and expanding the information packets distributed this spring to medical writers, newspaper and magazine editors, and broadcast media news directors throughout the state.
- 8. Continued efforts by the Association staff and the agency to seek and coordinate requests for speakers by civic and professional organizations.

The foregoing capsules only the most basic public relations activities to be pursued in behalf of the Arizona Medical Association during 1974-75. Additional project-oriented activities will undoubtedly be indicated as the result of state, national and international events relating to the practice of medicine.—RECEIVED.

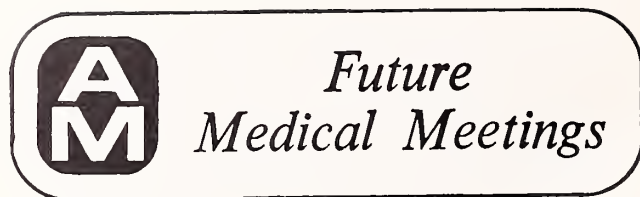
TODAY'S HEALTH T.V. SHOW

Mr. Robinson reviewed the American Medical Association material relating to the TV show "Today's Health" and the possibility of getting it for use in Arizona.

It was determined that Mr. Robinson would follow through to determine the quality of the program and its availability.

Meeting adjourned 8:17 p.m.

Wm. E. Crisp, M.D.
Secretary
Bruce E. Robinson
Executive Director



Future Medical Meetings

PHOENIX PSYCHIATRIC COUNCIL CONTINUING EDUCATION PROGRAM

September 1974 — May 1975
Arizona Medical Association Offices
810 W. Bethany Home Rd.
Phoenix, AZ 85013

SPONSOR: Phoenix Psychiatric Council

CONTACT:

Robert H. Barnes, M.D.
525 N. 18th St.
Phoenix, AZ 85006

Approved for 2 required hours per session toward the ArMA Certificate in Continuing Medical Education.

TUBERCULOSIS TODAY

October 1-3, 1974
Los Olivos Hotel, Phoenix, AZ

SPONSOR: Arizona Lung Assoc., Phoenix
Area Indian Health Service

CONTACT:

Michael Cynamon, M.D.
1440 E. Indian School Rd.
Phoenix, AZ

Approved for 15 required hours toward the ArMA Certificate in Continuing Medical Education.

AN UPDATE ON PSYCHOTROPIC DRUGS

October 4, 1974
Personnel & Education Bldg.
Arizona State Hospital
Phoenix, AZ

SPONSOR: Arizona State Hospital

CONTACT:

Eli Schlossberg, R.Ph.
Arizona State Hospital
2500 E. Van Buren
Phoenix, AZ

Approved for 3 required hours toward the ArMA Certificate in Continuing Medical Education.

FOR THE PHYSICIAN IN PRIVATE PRACTICE: DIAGNOSIS AND MANAGEMENT OF THE CHILD WITH MINIMAL BRAIN DYSFUNCTION

October 5, 6, 1974
Scottsdale Hilton Hotel, Scottsdale, AZ

SPONSOR: Good Samaritan Hospital, University
of Arkansas Medical Center, Arizona
Chapter, American Academy of Pediatrics.

CONTACT:

Clarence R. Laing, M.D.
Good Samaritan Hospital
1033 E. McDowell Rd.
Phoenix, AZ 85006

Approved for 10 required hours toward the ArMA Certificate in Continuing Medical Education.

WORKSHOP FOR TEACHERS IN FAMILY PRACTICE TRAINING

October 6-9, 1974
Tanque Verde Guest Ranch, Tucson, AZ

SPONSOR: Dept. of Family & Community Medicine
U of A College of Medicine
Tucson, AZ

CONTACT:

Anthony F. Vuturo, M.D.
Dept. of Family & Community Medicine
U of A College of Medicine
Tucson, AZ 85724

Approved for 24 required hours toward the ArMA Certificate in Continuing Medical Education.

PROBLEM ORIENTED FAMILY PRACTICE REVIEW COURSE

October 10-13, 1974

SPONSOR: Dept. of Family & Community Medicine
U of A College of Medicine
Tucson, AZ 85724

CONTACT:

Anthony F. Vuturo, M.D.
Dept. of Family & Community Medicine
U of A College of Medicine
Tucson, AZ 85724

Approved for 30 required hours toward the ArMA Certificate in Continuing Medical Education.

POST-CONFERENCE — TRAVEL STUDY PROGRAM

October 14-18, 1974
Guadalajara Hilton
Guadalajara, Sonora, Mexico

SPONSOR: Dept. of Family & Community Medicine
U of A College of Medicine
Tucson, AZ 85724

CONTACT:
Anthony F. Vuturo, M.D.
Dept. of Family & Community Medicine
U of A College of Medicine
Tucson, AZ 85724

Approved for 18 required hours toward the ArMA Certificate in Continuing Medical Education.

BI-MONTHLY MEDICAL EDUCATION SEMINAR

Every other Wed. AM
Begin 7/3/74
Maryvale Samaritan Hospital, Phoenix, AZ

SPONSOR: Medical Staff Maryvale Hospital

CONTACT:
Thomas J. Groves, M.D.
6037 W. Elm St.
Phoenix, AZ 85033

Approved for 1 required hour per session toward the ArMA Certificate in Continuing Medical Education.

MANAGEMENT OF ACUTE SPINAL CORD INJURIES

November 6-8, 1974
Safari Convention Center
Scottsdale, AZ

SPONSOR: American Academy of Orthopedic Surgeons

CONTACT:
John S. Young, M.D.
Good Samaritan Hospital
1033 E. McDowell Rd.
Phoenix, AZ 85006

Approved for 18 required hours toward the ArMA Certificate in Continuing Medical Education.

CAMELBACK HOSPITAL CLINICAL CONFERENCE

3rd Tuesday monthly
Camelback Hospital, Phoenix, AZ

SPONSOR: Camelback Hospital

CONTACT:
Stuart M. Gould, Jr., M.D.
Medical Director
Camelback Hospital
5055 N. 34th St.
Phoenix, AZ 85018

Approved for 1 elective hour per session toward the ArMA Certificate in Continuing Medical Education.

22nd ANNUAL MEETING OF THE MEDICAL SOCIETY OF THE UNITED STATES AND MEXICO

November 6-9, 1974
Guadalajara, Jalisco, Mexico

SPONSOR: Medical Society of USA & Mexico

CONTACT:
Lucy A. Verneti, M.D.
333 West Thomas Rd., #207
Phoenix, AZ 85013

Approved for 12 required hours toward the ArMA Certificate in Continuing Medical Education.

PATIENT STAFFING CONFERENCE

Three times weekly
Camelback Hospital, Phoenix, AZ

SPONSOR: Camelback Hospital

CONTACT:
Stuart M. Gould, Jr., M.D.
Medical Director
Camelback Hospital
5055 N. 34th St.
Phoenix, AZ 85018

Approved for 1 elective hour per conference toward the ArMA Certificate in Continuing Medical Education.

MORBIDITY & MORALITY CONFERENCE

2nd Monday, Monthly, 12:45 p.m.
Scottsdale Memorial Hospital, Scottsdale, AZ

SPONSOR: Medical Staff

CONTACT:

R. C. Good, M.D.
Dir. Medical Education
7300 E. 4th St.
Scottsdale, AZ

Approved for 1 elective hour per conference toward the ArMA Certificate in Continuing Medical Education.

SURG'CAL GRAND ROUNDS 4TH TUESDAY OF EACH MONTH

Hospital Auditorium
Baptist Hospital, Phoenix

SPONSOR: Baptist Hospital Phoenix

CONTACT:

James B. Shields, M.D.
6036 N. 19th Ave.
Phoenix, AZ 85015

Approved for 1½ required hours per month toward the ArMA Certificate in Continuing Medical Education.

CLINICAL PATHOLOGICAL CONFERENCE

4th Monday, Monthly, 12:45 p.m.
Scottsdale Memorial Hospital, Scottsdale, AZ

SPONSOR: Medical Staff

CONTACT:

R. C. Good, M.D.
Director of Medical Education
7300 E. 4th St.
Scottsdale, AZ

Approved for 1 elective hour per conference toward the ArMA Certificate in Continuing Medical Education.

CARDIOLOGY CONFERENCE

Weekly — Friday 8-9 a.m.
St. Mary's Hospital Auditorium
Tucson, AZ

SPONSOR: St. Mary's Hospital

CONTACT:

A. L. Forte, M.D.
St. Mary's Hospital
Tucson, AZ 85724

Approved for one required hour toward the ArMA Certificate in Continuing Medical Education.

MEDICAL GRAND ROUNDS

3rd Monday, Monthly, 12:45 p.m.
Scottsdale Memorial Hospital, Scottsdale, AZ

SPONSOR: Medical Staff

CONTACT:

R. C. Good, M.D.
Dir. of Medical Education
7300 E. 4th St.
Scottsdale, AZ

Approved for 1 elective hour per conference toward the ArMA Certificate in Continuing Medical Education.

PROBLEM CASE WORKSHOPS

3rd Monday of each month 7:30 a.m.
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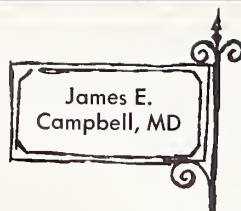
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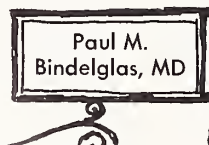
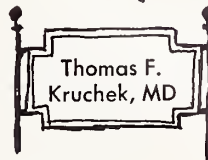
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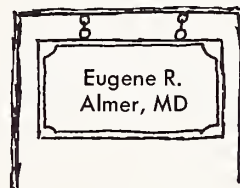
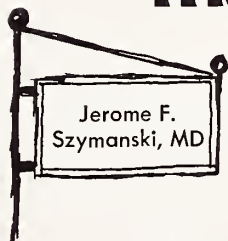
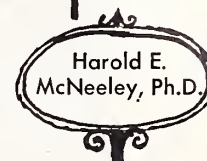
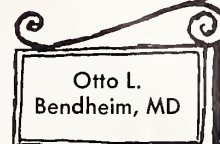
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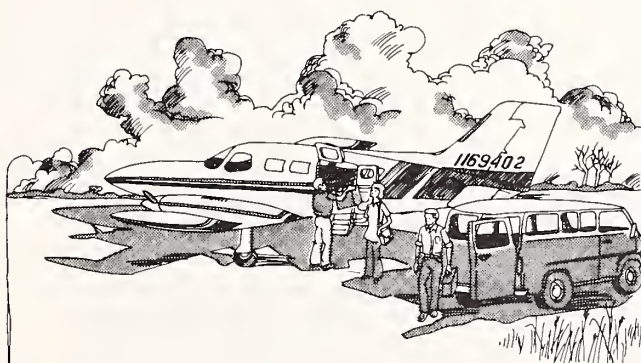
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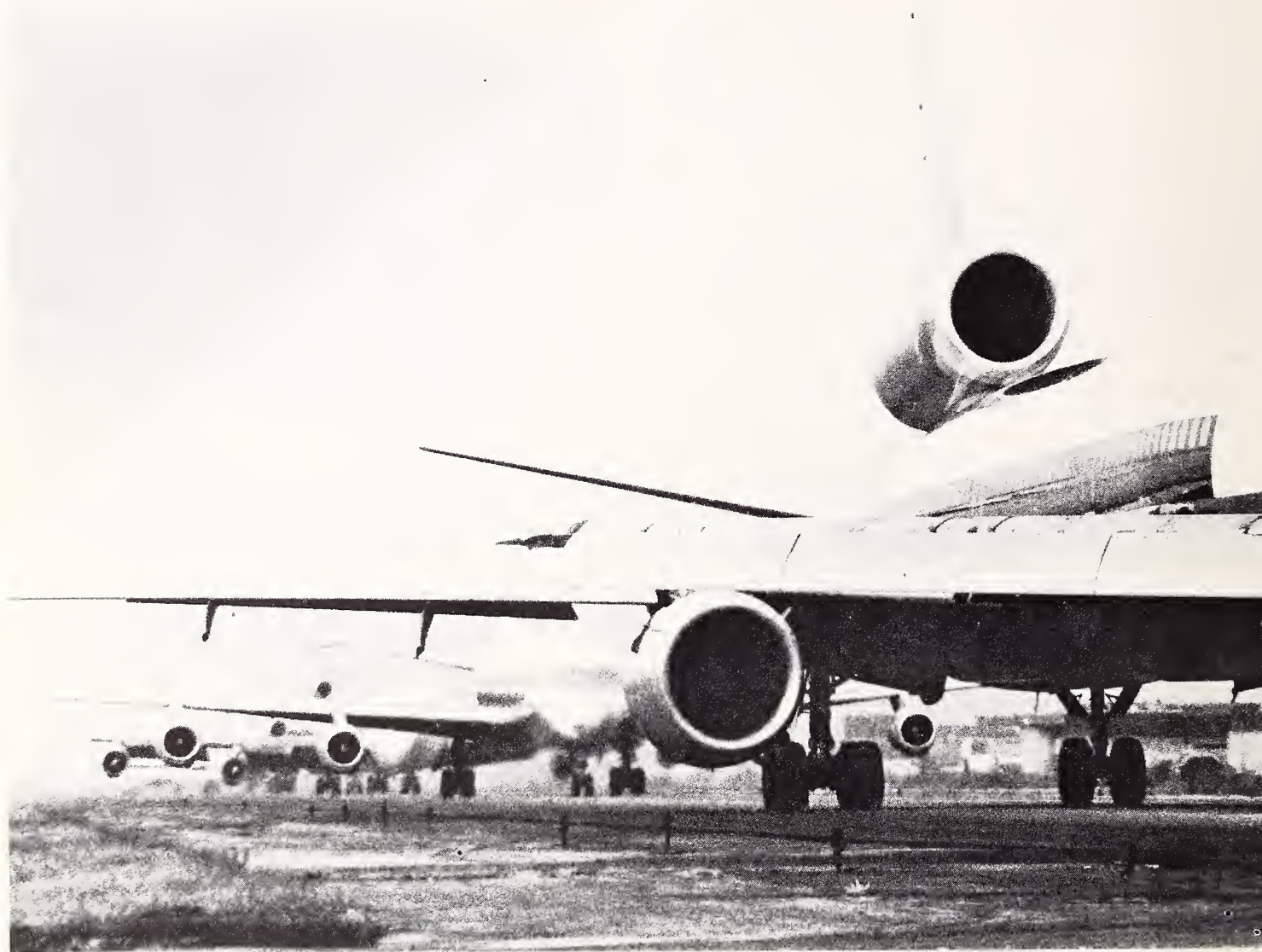
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how to civilize the of peptic ulcer...

give pain killers?...prescribe frequent eating?...use antacids only?

give pain killers only?

They relieve pain but may cause patient drug dependency and unnecessary sedation.

prescribe frequent eating only?

Frequent feeding helps buffer acid, but caloric, digestive, and social considerations make frequent eating both difficult and impractical.

use antacids only?

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Indications: Pro-Banthine is effective as adjunctive therapy in the treatment of peptic ulcer. Dosage must be adjusted to the individual.

Contraindications: Glaucoma, obstructive disease of the gastrointestinal tract, obstructive uropathy, intestinal atony, toxic megacolon, hiatal hernia associated with reflux esophagitis, or unstable cardiovascular adjustment in acute hemorrhage.

Warnings: Patients with severe cardiac disease should be given this medication with caution.

Fever and possibly heat stroke may occur due to anhidrosis.

In theory a curare-like action may occur, with loss of voluntary muscle

control. For such patients prompt and continuing artificial respiration should be applied until the drug effect has been exhausted.

Diarhea in an ileostomy patient may indicate obstruction, and this possibility should be considered before administering Pro-Banthine.

Precautions: Since varying degrees of urinary hesitancy may be evidenced by elderly males with prostatic hypertrophy, such patients should be advised to micturate at the time of taking the medication.

Overdosage should be avoided in patients severely ill with ulcerative colitis.

Adverse Reactions: Varying degrees of drying of salivary secretions may



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Both often



- Predominant psychoneurotic anxiety

- Associated depressive symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor

neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive dis-

orders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful

respond to one

According to her major symptoms, she is a psychoneurotic patient with severe anxiety. But according to the description she gives of her feelings, part of the problem may sound like depression. This is because her problem, though primarily one of excessive anxiety, is often accompanied by depressive symptomatology. Valium (diazepam) can provide relief for both—as the excessive anxiety is relieved, the depressive symptoms associated with it are also often relieved.

There are other advantages in using Valium for the management of psychoneurotic anxiety with secondary depressive symptoms: the psychotherapeutic effect of Valium is pronounced and rapid. This means that improvement is usually apparent in the patient within a few days rather than in a week or

two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.

For further information on this subject, the following references are provided:

1. Henry BW, *et al*: *Dis Nerv Syst* 30:675-679, Oct 1969.
2. Hollister LE, *et al*: *Arch Gen Psychiatry* 24:273-278, Mar 1971.
3. Claghorn J: *Psychosomatics* 11:438-441, Sept-Oct 1970.

surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of child-bearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies.

Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle



Valium[®] (diazepam) 2-mg, 5-mg, 10-mg tablets

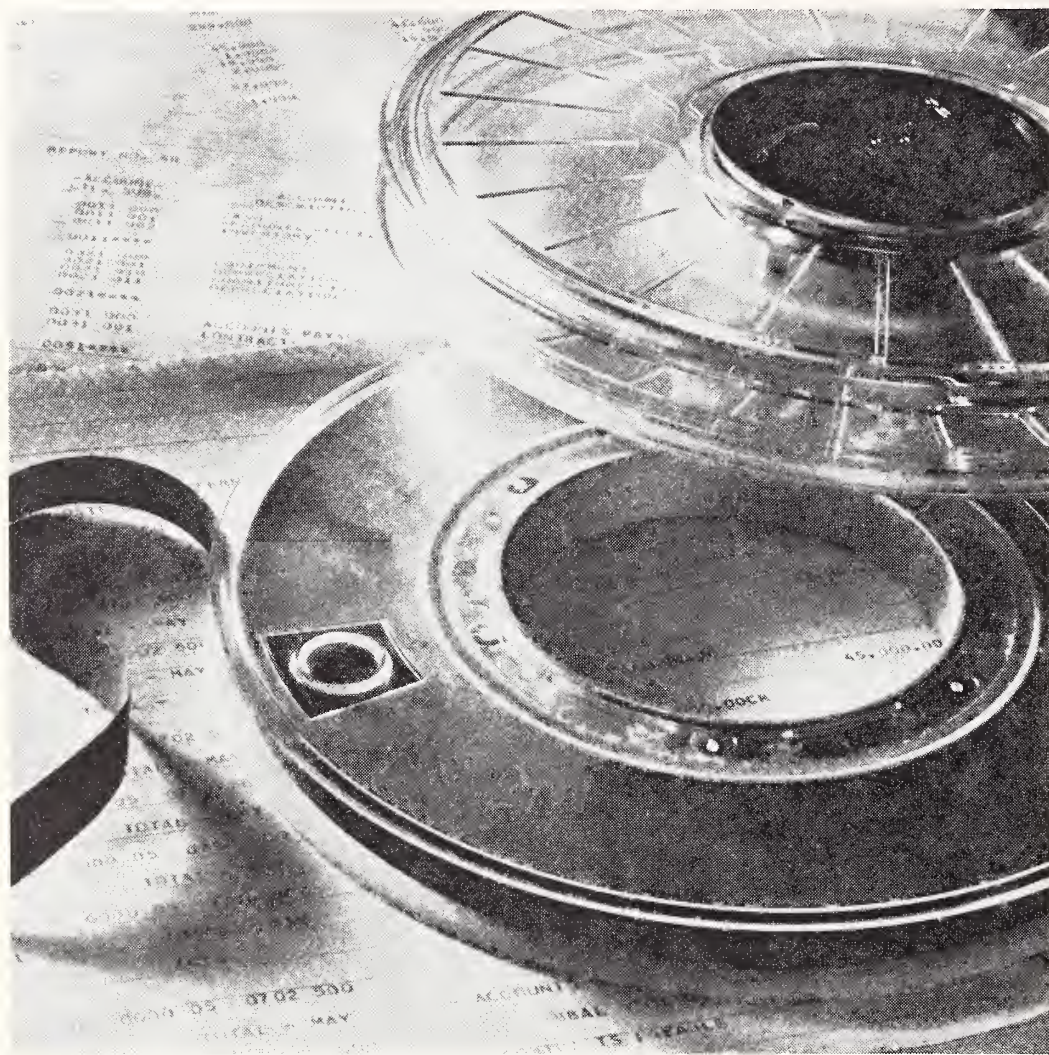
in psychoneurotic
anxiety states
with associated
depressive symptoms

spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.



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The colorful Moroccan street scene on
the cover of this issue is to entice
you to page 699 where you will find
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"African Adventure."

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1
chance
in

4
of
solar
keratoses*



At start of treatment with Efudex® (fluorouracil) Roche® 5% Cream—1/22/68. Patient shows widespread but mild solar keratoses.

Response after 11 days of treatment—2/2/68. Site of keratoses is now erythematous (erythematous reactions subside after therapy is discontinued). Lesions not visible before therapy have appeared. Intervening skin shows no response to application of cream.

One year after end of therapy—2/19/69. Skin appears clear, no evidence of scarring. No recurrences or new lesions.

*Statistical projection based on an epidemiologic study of all white adults over 40 years of age in Tipton County, Tenn., to determine prevalence of solar keratoses.

People in southern areas of the United States are at more risk of developing solar keratoses than those in the northerly latitudes. But solar keratoses—also called actinic or senile keratoses—can occur among any white-skinned population, wherever people work or play outdoors. And because lesions may be premalignant, it is generally agreed that they should be treated. Conventional therapy may present certain drawbacks for the physician as well as the patient, but Efudex (fluorouracil) Roche offers an alternative mode of therapy that's inexpensive, highly convenient, and almost always effective.

Selectivity of action

Healthy skin free of keratotic invasion shows no response to application of Efudex. Lesions which were not visible before therapy appear during application. Since the response is so predictable, lesions that do not respond should be biopsied to rule out the presence of frank neoplasm.

Excellent cosmetic results

Treatment with Efudex usually provides highly acceptable cosmetic results, as is evident in the patient shown. The incidence of scarring is low.[†] This is particularly important with multiple facial lesions. Efudex should be applied with care near the nose, eyes and mouth.

Convenience

To apply Efudex Cream to the skin, the patient may use a non-metal applicator, a suitable glove, or the fingertips. If the patient does not wear a glove, the hands should be washed immediately after the medication is applied. Efudex Solution is supplied in a plastic dispenser, which issues *only one drop* at a time—the Solution is very convenient to use for treating single lesions. It's convenient for you, too, to prescribe Efudex 5% Cream because it's almost impossible for a pharmacist to compound a 5% fluorouracil cream that has not lost its potency because of chemical degradation or evaporation during compounding.

5% Cream—a Roche exclusive

Only Roche formulates the 5% cream—high in patient acceptability—economical and superior in clinical efficacy to the 2% formulation for lesions of the hands and forearms.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Multiple actinic or solar keratoses.

Contraindications: Patients with known hypersensitivity to any of its components.

Warnings: If occlusive dressing used, may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultra-violet rays. Safe use in pregnancy not established.

Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

Adverse Reactions: Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, sup-puration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

How Supplied: Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris (hydroxymethyl) amino-methane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

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[†]Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey.

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The more physicians consider the hemodynamics of lowering blood pressure...

Most physicians now agree on the importance of reducing blood pressure in the hypertensive patient. But high blood pressure exists, of course, only as part of a complete clinical picture. The hemodynamic profile of well-established essential hypertension is characterized by elevated arterial blood pressure, normal cardiac output, and increased total peripheral resistance.

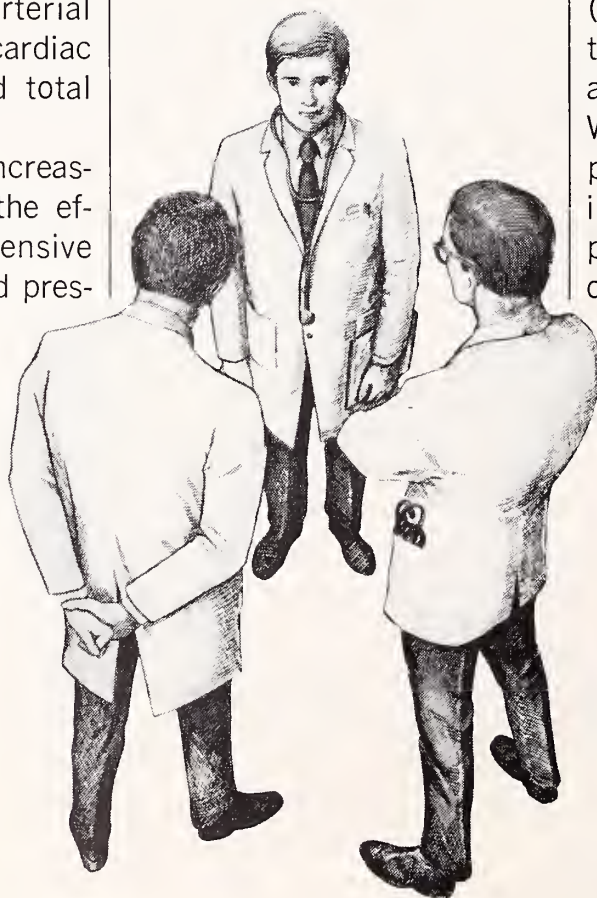
And so, physicians are increasingly concerned with the effects of an antihypertensive agent not only on blood pres-

sure itself but also on the hemodynamic pattern—in short, with the total effect of the drug. *Does it indeed help lower blood pressure effectively? Is peripheral resistance reduced? Are cardiac output and renal functions main-*

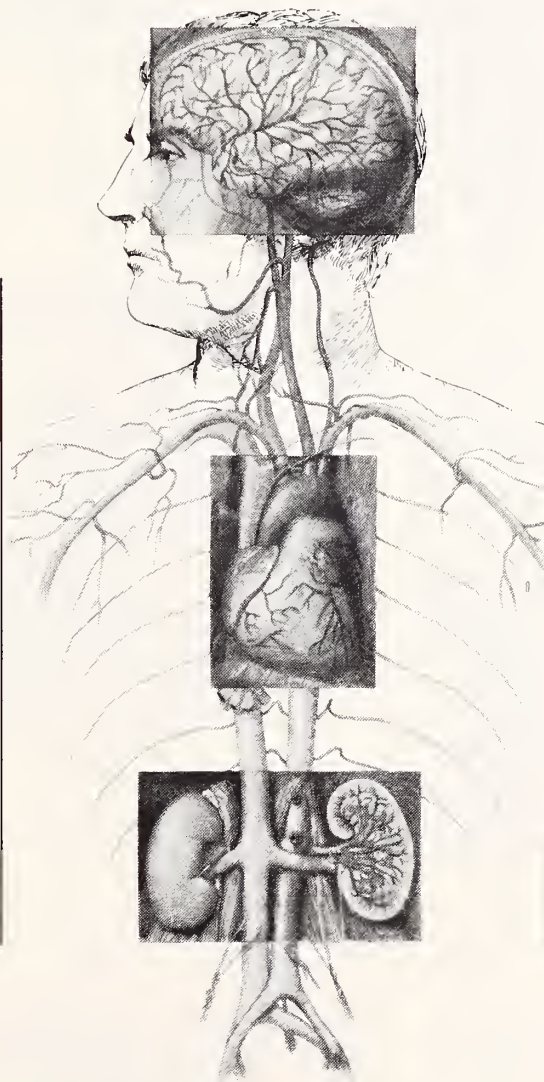
tained? And, also, is there likely to be drug-induced postural hypotension serious enough to pose a threat to the patient's cerebrovascular status?

With this emphasis on overall drug performance has come a growing reliance on ALDOMET® (Methyldopa, MSD) in the treatment of sustained moderate hypertension.

With its unique hemodynamic profile, ALDOMET has drawn increasing attention and approval from physicians. First, of course, for its efficacy in



the more physicians rely on this unique antihypertensive



lowering blood pressure. But there are other considerations as well. Cardiac output is usually maintained with no cardiac acceleration; in some patients the heart rate is actually slowed. Peripheral resistance is apparently reduced. ALDOMET does not usually compromise existing renal function; it generally does not reduce renal blood flow, glomerular filtration rate, or filtration fraction. And ALDOMET usually does not cause symptomatic postural or exercise hypotension.

Contraindications include active hepatic disease and known sensitivity to the drug. Use with caution in patients with a history of liver disease or dysfunction. Not recommended in pheochromocytoma or pregnancy. It is important to recognize that a positive Coombs test, hemolytic anemia, and liver disorders may occur with methyldopa therapy. The rare occurrences of hemolytic anemia or liver disorders could lead to potentially fatal complications unless properly recognized and managed. For more details see the brief summary of prescribing information.

In most cases of sustained moderate hypertension

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(METHYLDOPA | MSD)

smoothly lowers blood pressure

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now available in
500 mg TABLETS
as well as the standard
250-mg tablets

For a brief summary of prescribing information,
please see following page.

In most cases of
sustained moderate hypertension

ALDOMET[®]

(METHYLDOPA MSD)

smoothly lowers blood pressure

Contraindications: Active hepatic disease, such as acute hepatitis and active cirrhosis. Known sensitivity. Not recommended in pheochromocytoma. Unsuitable in mild or labile hypertension responsive to mild sedation or thiazide therapy. Use cautiously in patients with history of previous liver disease or dysfunction.

Warnings: It is important to recognize that a positive Coombs test, hemolytic anemia, and liver disorders may occur with methyldopa therapy. The rare occurrences of hemolytic anemia or liver disorders could lead to potentially fatal complications unless properly recognized and managed. Read this section carefully to understand these reactions.

With prolonged methyldopa therapy, 10% to 20% of patients develop a positive direct Coombs test, usually between six and twelve months of therapy. Lowest incidence is at daily dosage of 1 g or less. This on rare occasions may be associated with hemolytic anemia, which could lead to potentially fatal complications. One cannot predict which patients with a positive direct Coombs test may develop hemolytic anemia. Prior existence or development of a positive direct Coombs test is not in itself a contraindication to use of methyldopa. If a positive Coombs test develops during methyldopa therapy, determine whether hemolytic anemia exists and whether the positive Coombs test may be a problem. For example, in addition to a positive direct Coombs test there is less often a positive indirect Coombs test which may interfere with cross matching of blood.

At the start of methyldopa therapy, it is desirable to do a blood count (hematocrit, hemoglobin, or red cell count) for a baseline or to establish whether there is anemia. Periodic blood counts should be done during therapy to detect hemolytic anemia. It may be useful to do a direct Coombs test before therapy and at six and twelve months after the start of therapy. If Coombs-positive hemolytic anemia occurs, the cause may be methyldopa and the drug should be discontinued. Usually the anemia remits promptly. If not, corticosteroids may be given and other causes of anemia should be considered. If the hemolytic anemia is related to methyldopa, the drug should not be reinstituted. When methyldopa causes Coombs positivity alone or with hemolytic anemia, the red cell is usually coated with gamma globulin of the IgG (gamma G) class only. The positive Coombs test may not revert to normal until weeks to months after methyldopa is stopped.

Should the need for transfusion arise in a patient receiving methyldopa, both a direct and an indirect Coombs test should be performed on his blood. In the absence of hemolytic anemia, usually only the direct Coombs test will be positive. A positive direct Coombs test alone will not interfere with typing or cross matching. If the indirect Coombs test is also positive, problems may arise in the major cross match and the assistance of a hematologist or transfusion expert will be needed.

Fever has occurred within first three weeks of therapy, sometimes with eosinophilia or abnormalities in liver function tests, such as serum alkaline phosphatase, serum transaminases (SGOT, SGPT), bilirubin, cephalin cholesterol flocculation, prothrombin time, and bromsulphalein retention. Jaundice, with or without fever, may occur, with onset usually in the first two to three months of therapy. Rarely fatal hepatic necrosis has been reported. These hepatic changes may represent hypersensitivity reactions; periodic determination of hepatic function should be done particularly during the first six to twelve weeks of therapy or

whenever an unexplained fever occurs. If fever, abnormalities in liver function tests, or jaundice appear, stop therapy with methyldopa. If caused by methyldopa, the temperature and abnormalities in liver function characteristically have reverted to normal when the drug was discontinued. Methyldopa should not be reinstituted in such patients.

Rarely, reversible reduction in leukocyte count with primary effect on granulocytes has been seen. Reversible thrombocytopenia has occurred rarely. When used with other antihypertensive drugs, potentiation of antihypertensive effect may occur.

Use in Pregnancy and Childbearing Age—Not recommended in pregnancy. In women of childbearing age, weigh potential benefits against possible fetal hazards.

Precautions: Methyldopa may interfere with measurement of: uric acid by the phosphotungstate method, creatinine by the alkaline picrate method, and SGOT by colorimetric methods. Since methyldopa causes fluorescence in urine samples at the same wavelengths as catecholamines, spuriously high levels of urinary catecholamines may be reported. This will interfere with the diagnosis of pheochromocytoma. Stop drug if involuntary choreoathetotic movements occur in patients with severe bilateral cerebrovascular disease. Patients may require reduced doses of anesthetics; hypotension occurring during anesthesia usually can be controlled with vasopressors. Hypertension has occurred after dialysis in patients on methyldopa because the drug is removed by this procedure.

Adverse Reactions: Sedation, usually transient, may be seen during initial therapy or when dosage is increased. Headache, asthenia, or weakness may be noted as early, transient symptoms. Symptoms associated with effective lowering of blood pressure are occasionally seen and include dizziness, lightheadedness, and symptoms of cerebrovascular insufficiency. Angina pectoris may be aggravated. Symptoms of orthostatic hypotension may occur; if symptoms occur, reduction of dosage is suggested. Bradycardia, nasal stuffiness, mild dryness of mouth, and gastrointestinal symptoms including distention, constipation, flatulence, and diarrhea occur occasionally; these generally can be relieved by reducing dosage. Nausea and vomiting have been reported in only a few patients. Sore tongue or "black tongue," pancreatitis, and inflammation of salivary glands may occur.

Weight gain and edema occur infrequently and are relieved by administering a thiazide diuretic; if edema progresses or signs of pulmonary congestion appear, discontinue drug. A rise in BUN has been observed. Other rare reactions include breast enlargement, lactation, impotence, decreased libido, skin rash, mild arthralgia, myalgia, paresthesias, Bell's palsy, parkinsonism, psychic disturbances including nightmares, reversible mild psychoses or depression. Urine exposed to air after voiding may darken because of breakdown of methyldopa or its metabolites.

Note: Dosage should be limited initially to 500 mg daily when following previous antihypertensive agents other than thiazides. Maximal recommended daily dose is 3.0 g. Patients with impaired renal function may respond to smaller doses than patients with normal kidney function. Syncope in older patients has been related to increased sensitivity in those with advanced arteriosclerotic vascular disease; this may be avoided by lower doses. Tolerance occasionally seen either early or late, but more likely between second and third month after initiation of therapy; increased dosage or combined therapy with a thiazide frequently restores effective control.

How Supplied: Tablets, containing 250 mg methyldopa each, in single-unit packages of 100 and bottles of 100 and 1000; Tablets, containing 500 mg methyldopa each, in single-unit packages of 100 and bottles of 100.

For more detailed information, consult your MSD representative or see full prescribing information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

addendum

MSD
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"Required Reading" For Your Hypertensive Patients



Because of the importance of patient motivation, Merck Sharp & Dohme offers "High Blood Pressure," a concise, pocket-sized booklet that defines the patient's own role in the management of hypertension. This booklet is available for you to give to your patients. It is designed to reinforce your explanation of hypertension and it emphasizes the importance of patient understanding in adhering to the regimen you prescribe.

Please ask your Merck Sharp & Dohme Professional Representative or write Professional Service Department, West Point, Pa. 19486 for a supply of this booklet.

The **ALLBEE® with C** Scrapbook of Vitamin Facts & Fallacies

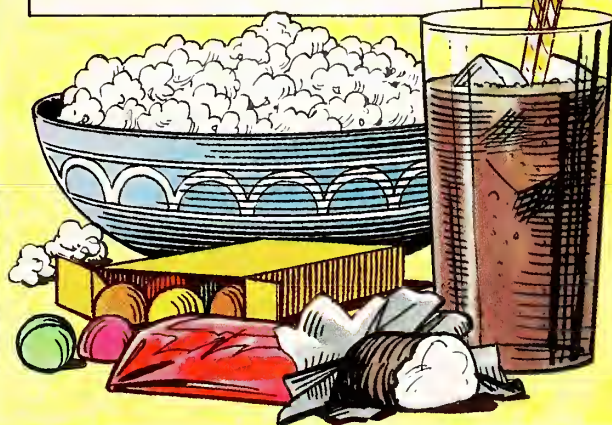


The Indian fruit-eating bat, almost all monkeys, man and the guinea pig are the only mammals whose bodies lack an enzyme needed to synthesize ascorbic acid from glucose! Hence they must obtain their vitamin C from exogenous sources.



De Joinville writing about a 13th century crusade reported that barber surgeons had to "cut away the dead flesh from the gums to enable people to masticate their food!" The disease he described was probably scurvy.

A 1965 U.S.D.A. survey revealed that American diets were lower in vitamin C than they had been 10 years earlier!



The outer leaves of cabbage and brussels sprouts contain more vitamin C than the heads. Yet, ironically, these are often trimmed away by the grocer to improve appearance and enhance sales appeal! Many housewives trim them even more before cooking!

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Spasm reactor?

Donnatal!

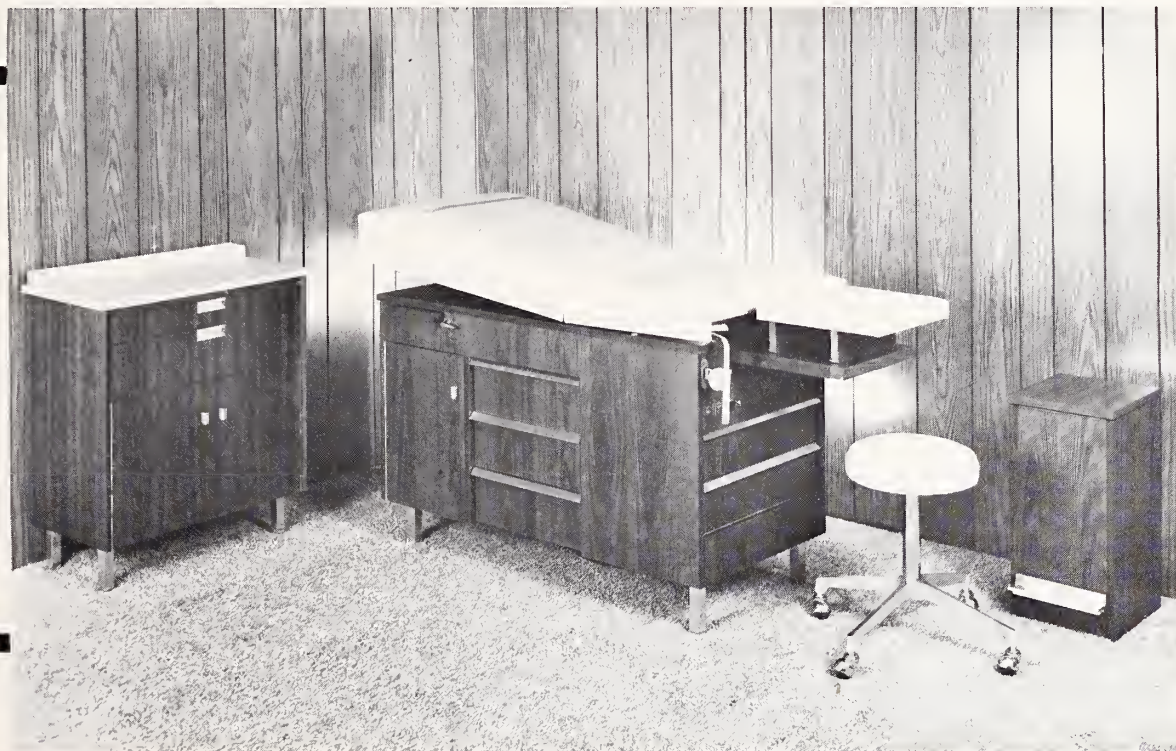
	each tablet, capsule or 5 cc. teaspoonful of elixir (23% alcohol)	each Donnatal No. 2	each Extentab
hyoscyamine sulfate	0.1037 mg.	0.1037 mg.	0.3111 mg.
atropine sulfate	0.0194 mg.	0.0194 mg.	0.0582 mg.
hyoscine hydrobromide	0.0065 mg.	0.0065 mg.	0.0195 mg.
phenobarbital	(¼ gr.) 16.2 mg.	(½ gr.) 32.4 mg.	(¾ gr.) 48.6 mg.
(warning: may be habit forming)			

Brief summary. Adverse Reactions: Blurring of vision, dry mouth, difficult urination, and flushing or dryness of the skin may occur on higher dosage levels, rarely on usual dosage. Contraindications: Glaucoma; renal or hepatic disease; obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy); or hypersensitivity to any of the ingredients.

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Material submitted for publication in ARIZONA MEDICINE should conform to the following policies:

1. Manuscripts, including references or bibliography, should be typewritten, double-spaced, on one side of the paper only, and the original and a carbon enclosed.

2. Be guided by the general rules of medical writing as followed by the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

3. Although the Editors try to catch inaccuracies, the ultimate responsibility is the author's.

4. Articles are accepted for publication only if they are contributed exclusively to this Journal. Ordinarily, contributors will be notified within 60 days if a manuscript is accepted for publication. Every effort will be made to return unused manuscripts.

5. The Journal reserves the right to edit all material.

6. Reprints will be supplied to the author at printing cost.

Rondomycin® (methacycline HCl)

CONTRAINDICATIONS: Hypersensitivity to any of the tetracyclines.

WARNINGS: Tetracycline usage during tooth development (last half of pregnancy to eight years) may cause permanent tooth discoloration (yellow-gray-brown), which is more common during long-term use but has occurred after repeated short-term courses. Enamel hypoplasia has also been reported. **Tetracyclines should not be used in this age group unless other drugs are not likely to be effective or are contraindicated.** Usage in pregnancy. (See above **WARNINGS** about use during tooth development.)

Animal studies indicate that tetracyclines cross the placenta and can be toxic to the developing fetus (often related to retardation of skeletal development). Embryotoxicity has also been noted in animals treated early in pregnancy.

Usage in newborns, infants, and children. (See above **WARNINGS** about use during tooth development.)

All tetracyclines form a stable calcium complex in any bone-forming tissue. A decrease in fibula growth rate observed in prematures given oral tetracycline 25 mg/kg every 6 hours was reversible when drug was discontinued.

Tetracyclines are present in milk of lactating women taking tetracyclines.

To avoid excess systemic accumulation and liver toxicity in patients with impaired renal function, reduce usual total dosage and, if therapy is prolonged, consider serum level determinations of drug. The anti-anabolic action of tetracyclines may increase BUN. While not a problem in normal renal function, in patients with significantly impaired function, higher tetracycline serum levels may lead to azotemia, hyperphosphatemia, and acidosis.

Photosensitivity manifested by exaggerated sunburn reaction has occurred with tetracyclines. Patients apt to be exposed to direct sunlight or ultraviolet light should be so advised, and treatment should be discontinued at first evidence of skin erythema.

PRECAUTIONS: If superinfection occurs due to overgrowth of nonsusceptible organisms, including fungi, discontinue antibiotic and start appropriate therapy.

In venereal disease, when coexistent syphilis is suspected, perform darkfield examination before therapy, and serologically test for syphilis monthly for at least four months.

Tetracyclines have been shown to depress plasma prothrombin activity; patients on anticoagulant therapy may require downward adjustment of their anticoagulant dosage.

In long-term therapy, perform periodic organ system evaluations (including blood, renal, hepatic).

Treat all Group A beta-hemolytic streptococcal infections for at least 10 days.

Since bacteriostatic drugs may interfere with the bactericidal action of penicillin, avoid giving tetracycline with penicillin.

ADVERSE REACTIONS: Gastrointestinal (oral and parenteral forms): anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis, inflammatory lesions (with monilial overgrowth) in the anogenital region.

Skin: maculopapular and erythematous rashes; exfoliative dermatitis (uncommon). Photosensitivity is discussed above (See **WARNINGS**).

Renal toxicity: rise in BUN, apparently dose related (See **WARNINGS**).

Hypersensitivity: urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus.

Bulging fontanels, reported in young infants after full therapeutic dosage, have disappeared rapidly when drug was discontinued.

Blood: hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia.

Over prolonged periods, tetracyclines have been reported to produce brown-black microscopic discoloration of thyroid glands; no abnormalities of thyroid function studies are known to occur.

USUAL DOSAGE: Adults—600 mg daily, divided into two or four equally spaced doses. More severe infections: an initial dose of 300 mg followed by 150 mg every six hours or 300 mg every 12 hours. Gonorrhea: In uncomplicated gonorrhea, when penicillin is contraindicated, 'Rondomycin' (methacycline HCl) may be used for treating both males and females in the following clinical dosage schedule: 900 mg initially, followed by 300 mg q.i.d. for a total of 5.4 grams.

For treatment of syphilis, when penicillin is contraindicated, a total of 18 to 24 grams of 'Rondomycin' (methacycline HCl) in equally divided doses over a period of 10-15 days should be given. Close follow-up, including laboratory tests, is recommended.

Eaton Agent pneumonia: 900 mg daily for six days.

Children—3 to 6 mg/lb/day divided into two to four equally spaced doses.

Therapy should be continued for at least 24-48 hours after symptoms and fever have subsided.

Concomitant therapy: Antacids containing aluminum, calcium or magnesium impair absorption and are contraindicated. Food and some dairy products also interfere. Give drug one hour before or two hours after meals. Pediatric oral dosage forms should not be given with milk formulas and should be given at least one hour prior to feeding.

In patients with renal impairment (see **WARNINGS**), total dosage should be decreased by reducing recommended individual doses or by extending time intervals between doses.

In streptococcal infections, a therapeutic dose should be given for at least 10 days.

SUPPLIED: 'Rondomycin' (methacycline HCl): 150 mg and 300 mg capsules; syrup containing 75 mg/5 cc methacycline HCl.

Before prescribing, consult package circular or latest POR information.

Rev. 6/73



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**When the focus is on bronchitis due to
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Rondomycin[®] 300 mg.
[methacycline HCl] Capsules

Delivers from the very first dose:

**Studies show that after the first dose serum levels rapidly rise above
minimum *in vitro* inhibitory concentrations**

*Since many strains are known to be resistant, routine sensitivity testing is recommended.

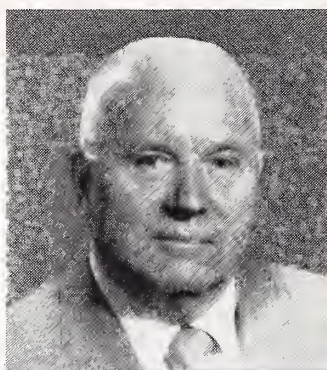
The Role of the Detail Man

"I may be prejudiced, but I am very much in favor of the detail men I meet. Most of them are knowledgeable about the drugs they promote and can be a great help in acquainting me with new medication."

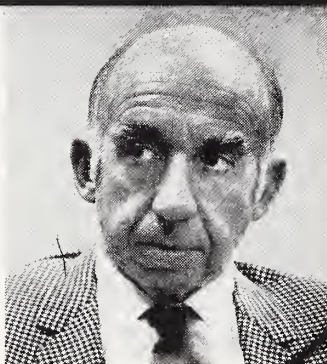
Family Physician's Perception

I think that most general practitioners in this area feel as I do about the detail man. Over the years I have gotten to know most of the men who visit me regularly and they in turn have become aware of my particular interests and the nature of my practice. They, therefore, limit their discussion as much as possible to the areas of interest to me. Since I usually see the same representative again in future visits, it is in his best interest to supply me with the most honest, factual, as well as up-to-date information about his products.

Dr. Willard Gobbell
Family Physician
Encino, California



Dr. Jeremiah Stamler
Chairman
Department of Community
Health and Preventive
Medicine, and Dingman
Professor of Cardiology
Northwestern University
Medical School



"In the total picture of dealing with health problems in this country there is a potential for detail men to play a meaningful role."

The Positive Influence

My contact with representatives and salesmen of the pharmaceutical industry is the type of contact that people in a medical center, research people, and academic people have and that's in all likelihood on a somewhat different level from that of the practicing physician.

Let me touch on how I personally perceive the role of the sales representative. These men reach large numbers of health professionals. Thus they could be—and at times actually are—disseminators of useful information. They could consistently serve a real educational function in their ability to discuss their products.

At present they do distribute printed material, brochures and pamphlets—some of it scientifically sound and therefore truly useful—as well as some excellent film produced by the pharmaceutical industry. When they function in this

Opinion
&
Dialogue

Is He a Source of Information?

Yes, with certain reservations. The average sales representative has a great fund of information about the drug products he is responsible for. He is usually able to answer most questions fully and intelligently. He can also supply reprints of articles that contain a great deal of information. Here, too, I exercise some caution. I usually accept most of the statements and opinions that I find in the papers and studies which come from the larger teaching facilities. It goes without saying that a physician should also rely on other sources for his information on pharmacology.

Training of Sales Representatives

Ideally, a candidate for the position as a sales representative of a pharmaceutical company should be a graduate pharmacist who has a questioning mind. I don't think this is possible in every case, and so it becomes the responsibility

of the pharmaceutical company to train these individuals comprehensively. It is of very great importance that the detail man's knowledge of the product he represents be constantly reviewed as well as updated. This phase of the sales representative's education should be a major responsibility of the medical department of the pharmaceutical company.

I am certain that most of these companies take special care to give their detail men a great deal of information about the products they produce—information about indications, contraindications, side effects and precautions. Yet, although most of the detail men are well informed, some, unfortunately, are not. It might be helpful if sales representatives were reassessed every few years to determine whether or not they are able to fulfill their important function. Incidentally, I feel the same way about periodic assessments of everyone

in the health care field, whether they be general practitioners, surgeons or salesmen.

Value of Sampling

I personally am in favor of limited sampling. I do not use sampling in order to perform clinical testing of a drug. I feel that drug testing should rightly be left to the pharmacology researcher and to the large teaching institutions where such testing can be done in a controlled environment.

I do not use samples as a "starter dose" for my patients. I do, however, find samples of drugs to be of value in that they permit me to see what the particular medication looks like. I get to see the various forms of the particular medication at first hand, and if it is in a liquid form I take the time to taste it. In that way I am able to give my patients more complete information about the particular medications that I prescribe for them.

capacity they are indeed useful; particularly in the fact that they disseminate broadly based educational material and serve not just as "pushers" of their drugs.

The Other Side of the Coin

Obviously, the pharmaceutical companies are not producing all this material as a labor of love—they are in the business of selling products for profit. In this regard the ambitious and improperly motivated sales representative can exert a negative influence on the practicing physician, both by presenting a one-sided picture of his product, and by encouraging the practitioner to depend too heavily on drugs for his total therapy. In these ways, the salesman has often distorted objective reality and undermined his potential role as an educator.

The Industry Responsibility

Since the detail man must be an information resource as well as a representative of his particular pharmaceutical company, he should be carefully selected and

thoroughly trained. That training, perforce, must be an ongoing one. There must be a continuing battle within and with the pharmaceutical industry for high quality not only in the selection and training of its sales representatives, but also in the development of all of its promotional and educational material.

The industry must be ready to accept constructive as well as corrective criticism from experts in the field and consumer spokesmen, and be willing to accept independent peer review. The better educated and prepared the salesman is, the more medically accurate his materials, the better off the pharmaceutical industry, health professionals and the public—*i.e.*, the patients—will be.

Physician Responsibility

The practicing physician is in constant need of up-dated information on therapeutics, including drugs. He should and does make use of drug information and answers to specific questions supplied by the pharmaceutical representative. However, that informa-

tion must not be his main source of continuing education. The practitioner must keep up with what is current by making use of scientific journals, refresher courses, and information received at scientific meetings.

The practicing physician not only has the right, but has the responsibility to demand that the pharmaceutical company and its representatives supply a high level of valid and useful information. I feel certain that if such a high level is demanded by the physician as well as the public, this demand will be met by an alert and concerned pharmaceutical industry.

From my experience, my impression is that sectors of the pharmaceutical industry are indeed ethical. I challenge the industry as a whole to live up to that word in its finest sense.

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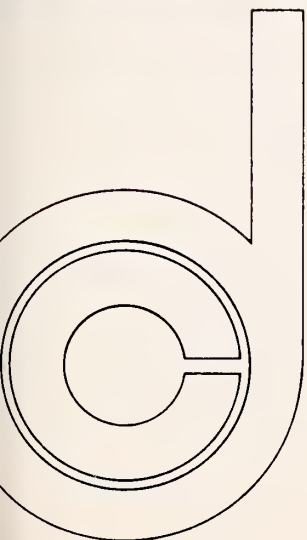
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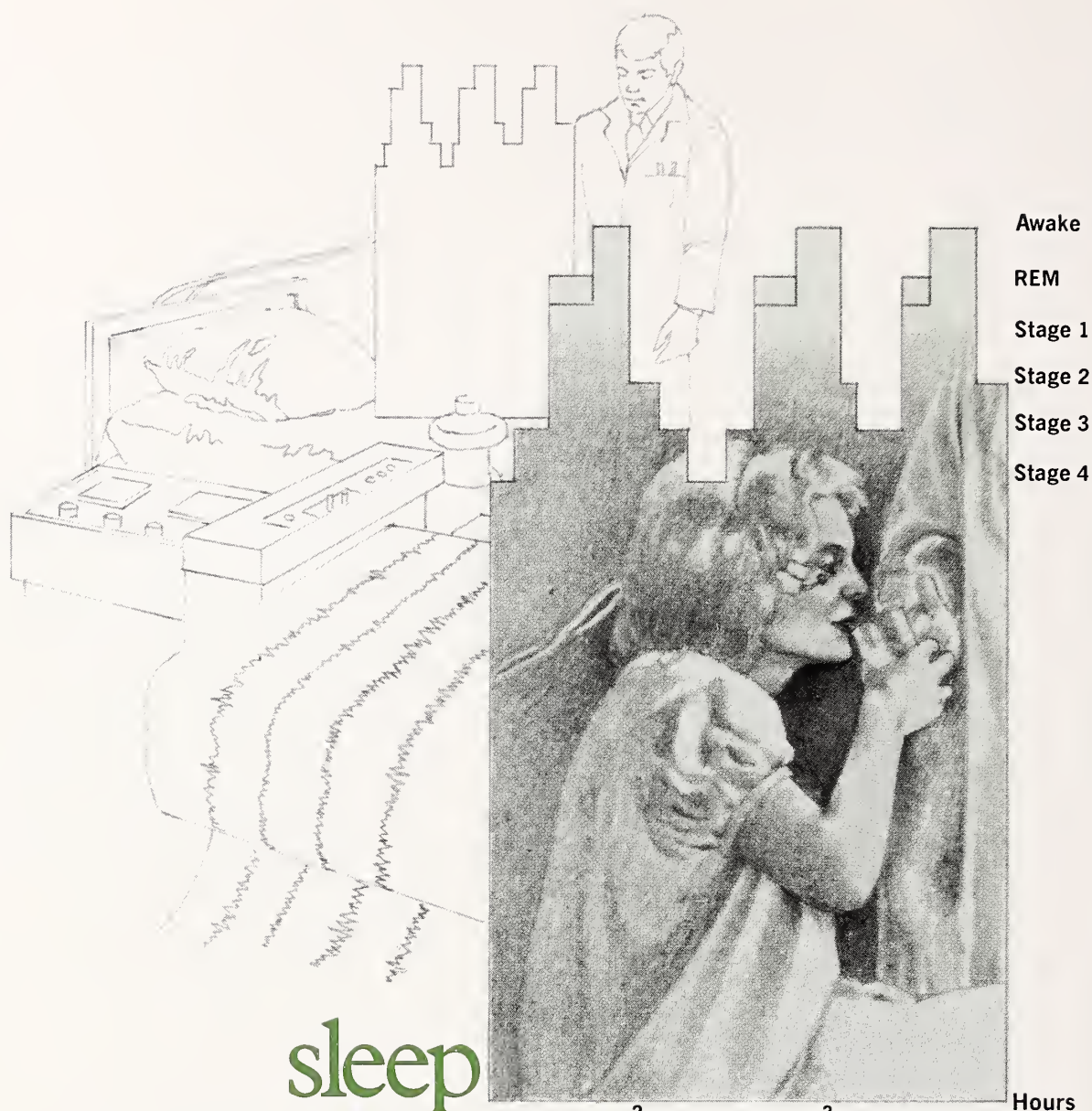
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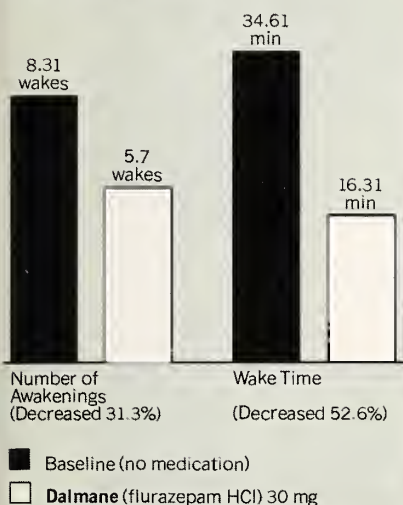


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(flurazepam HCl) proved by a
**17-night clinical study in the sleep research
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Eight patients received no medication on nights 1-4; Dalmane (flurazepam HCl) or placebo on nights 5-9; crossover capsule, nights 10-14; and no medication, nights 15-17. While placebo had no significant effect on sleep maintenance, Dalmane reduced nighttime awakenings by 55.1% when given on nights 5-9, 43.7% on nights 10-14. When four control subjects received placebo on the 10 "drug" nights, awakenings *increased* 11.5% over baseline.¹

Average Number of Awakenings and Minutes of Wake Time (4 Studies, 16 Subjects)²⁻⁵



confirmed by clinical studies in four geographically separated sleep research laboratories²⁻⁵

Using a 14-night protocol, involving eight insomniac and eight normal subjects, four studies confirmed the sleep-maintaining effectiveness of Dalmane (flurazepam HCl) and the reproducibility of this response. On average, one 30-mg capsule reduced number of awakenings by 31.3% and wake time by 52.6%. In all these studies, Dalmane induced sleep rapidly, on average within 17 minutes; reduced nighttime awakenings; and provided, on average, 7 to 8 hours of sleep without repeating dosage.²⁻⁵

Dalmane (flurazepam HCl) induces and maintains sleep, with relative safety

Dalmane is generally well tolerated; morning "hang-over" has been relatively infrequent. While dizziness, drowsiness, lightheadedness and the like have been noted most often, particularly in the elderly and debilitated, physicians should be aware of the possibility of more serious reactions, as noted in the Complete Product Information.

Before prescribing Dalmane (flurazepam HCl), please consult Complete Product Information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

Contraindications: Known hypersensitivity to flurazepam HCl.

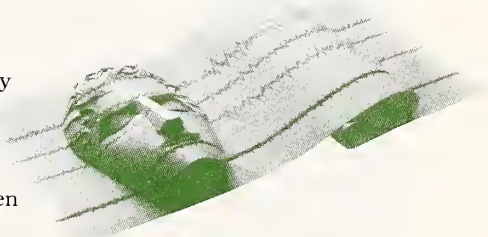
Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addition-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, e.g., excitement, stimulation and hyperactivity, have also been reported in rare instances.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.

Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.



when restful sleep is indicated **Dalmane**[®] (flurazepam HCl)

One 30-mg capsule h.s. — usual adult dosage (15 mg may suffice in some patients).

One 15-mg capsule h.s. — initial dosage for elderly or debilitated patients.

- induces sleep within 17 minutes, on average
- reduces nighttime awakenings
- sustains sleep 7 to 8 hours, on average, without repeating dosage

REFERENCES: 1. Kales J, et al: *Clin Pharmacol Ther* 12:691-697, Jul-Aug, 1971

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Original Articles

SOCIO-MEDICO-LEGAL ASPECTS OF ALCOHOL AND ALCOHOLISM



ROBERT J. JOLING

A.B., J.D., F.A.A.F.S.

Treatment of alcoholism is impaired by ambivalent, moralizing and pessimistic attitudes among treaters such as doctors, nurses, and social workers. Because alcoholism is not adequately understood, more research is needed. Too little attention is paid to nutrition and rehabilitation of the alcoholic. Treatment of an alcoholic must be individualized, but related to his culture. Treating an alcoholic as a criminal is a classical error of jurisprudence.

Amendment XXI to the Constitution of the United States, adopted in 1933, repealed the Eighteenth Article of Amendment to the Constitution. Within ten months of its proposal three-fourths of the several United States by conventions had ratified the amendment to repeal the constitutional prohibition against the transportation, importation, possession or use of intoxicating liquors within and between the several states. As a result our country can now reflect upon 41 years of history of alcohol consumption with its attendant influences of good or evil.

If we consider law in the "statutory" or in the "common law" (decision) areas as being the express will of the people through either elected representatives or a responsive judiciary, it would appear that the general population has little concern for serious health problems.

In this day when the average American citizen expects the best medical care as a matter of inherent right, and at the lowest possible cost, little heed is given to the horrendous proportions of our fourth leading national health problem, alcoholism.¹ Only three other health problems, mental illness, heart diseases, and cancer surpass that of alcoholism.

The World Health Organization Committee of Experts has defined alcoholism as:

"Alcoholics are those excessive drinkers whose dependence upon alcohol has reached such a degree that it results in noticeable mental disturbance, or in an interference with their bodily and mental health, their interpersonal relations, their smooth social and economic functioning, or those who show the prodromal signs of such developments."

It has been estimated that in excess of 80,000,000 persons in the United States use alcoholic beverages. Six per cent are considered excessive users and may be classified as problem drinkers. One to one and a half million persons may be classified as chronic alcoholics.²

Considering these statistics, it is not surprising that the United States counted 54,521 traffic deaths in 1969 and over 50,000 traffic deaths each year thereafter, of which it is estimated 50 to 60% involved the use of alcohol.³

Whether practicing medicine; practicing law; acting as a member of the judiciary; meting out therapeutic rehabilitation; using talents to apprehend the violator of law, or fulfilling any other duty within the entire spectrum of law enforcement, or the judicial framework of government, one must consider underlying reasons or causes for the existence of the problem. The realms of medicine, nursing, law or law enforcement, are intimately entwined in Behavioral Science. Thus, to even begin to understand the existence of a possible remedy, the underlying causative factors must at least be recognized!

Dr. Mito Tyndel stated that chronic drunkenness offenders differ from other drinkers. He asserted that chronic alcohol offenders have psychopathologic, psychiatric, and social disorders not found in other alcohol users.⁴

Reprint requests to: Dr. Joling, Assoc. Prof. of Medical Jurisprudence, U of A College of Medicine, Tucson, AZ 85724.

From the foregoing, it is readily noticeable that a serious problem of alcoholism and intoxication-related behavior exists in American society.

Myerson referred to American cultural attitudes toward alcohol drinking as "social ambivalence."⁵ He asserts that this ambivalence limits the development of stable attitudes toward drinking that may be found in some other cultures. This leads to the conclusion that drinking becomes an extreme and uncontrolled form of behavior for many. It was probably this conclusion that led Sholnick to state:⁶

"Total abstinence teaching which impounds and implants a repugnance to drinking and inebriety tends to identify the act of drinking with personal and social disorganization. Thus, it inadvertently suggests an inebriety pattern of drinking and encourages behavior it most deplors."

Skolnick is thus stating that persons who become alienated from their abstinence backgrounds may use excessive drinking as a reactive means to flee from or act out their frustrations resulting from early social teachings concerning alcohol drinking, whether found within the home, church, or community. Problem drinking in this sense is then a symbol of revolt and escape from inculcated values.

Against this theory, however, is the position that if alcohol drinking were more thoroughly an interdigitated social custom within the United States, competing opposites, abstinence and hedonism, would be neutralized. If so, the argument proceeds, the extreme pathology of alcoholism would disappear. To determine the merit of this argument, what proof exists to suggest its validity? Possibly the low alcoholism rates existing among the subcultures of Jews and Italians, with conversely high rates of alcoholism among Irish and Scandinavian populations — or the Papago Indians.

Jewish subculture integrates the act of drinking into the network of religious ideology, and consumption of alcoholic beverages is practiced and learned within a controlled family context. Drunkenness, even as related in the Biblical account of Noah and his sons, or of Lot and his daughters, is a social negative. On the other hand, sobriety is a virtue of Jewish culture. Amidst Irishmen, on the other hand, drinking alcohol is not associated with the complex of religious ideas and appears to be absent from

the usual familial social routines. Thus, to the Irishman, drinking may be hedonistic and utilitarian in nature. The anesthetic effects of alcohol allows the Irish hedonist to handle his psychic tensions. Therefore, the argument is made, to the Jew the consumption of alcohol is a part of his culture, whereas to the Irishman its consumption is part of cultural ambivalence.

Thus, if the foregoing cultural attitudes toward drinking exist, it is apparent that American cultural attitudes are far from uniform. Furthermore, social ambivalence is augmented by attitudes of differing religious groups such as the Jews whose religious ceremonies include the use of alcohol; the ascetic Protestant groups who advocate total abstinence; and the Irish-Catholics who traditionally treat the use of alcohol as a means of expressing friendliness and hospitality. Thus, American culture recognizes religious approval, utilitarian acceptance, and concepts of man's sinful proneness, in determining attitudes towards the consumption of alcohol.

The temperance movement in the United States during the early 20th century led to the adoption of the 18th Amendment to the Constitution of the United States. Belonging to the Women's Christian Temperance Union was often a middle-class small town status symbol in America. Today, on the other hand, total abstinence often may be interpreted as a negative status symbol. This apparently has resulted from the cosmopolitan attitude of the American socio-economic middle class which supports permissive drinking as a norm. So great has this accepted norm become that Mulford and Muller in their Iowa survey found 40% of the adult population were abstainers while 60% were users of alcohol.⁷ On the other hand the 1961 Knupfer study indicated that in California 13% of the population were abstainers, while 87% imbibed in the use of alcohol.⁸ Both of these studies also pointed up that amount and frequency of alcohol consumption vary with the socio-economic-cultural attributes of age, sex, education, residence and religion.⁹

As a result of past paternalistic attitudes of governmental agencies together with attitudes of professional workers such as psychiatrists, physicians, social workers, and nurses, primarily responsible for the treatment of the alcoholic, primitive and moralistic approaches to the treating of alcoholism prevailed. Only recently has

American society moved from the conceptualism of immorality and punitive persuasion to disease orientation in the treating of alcoholism. Effective therapy cannot be bottomed on individualistic attitudes which undermine the necessary relationships between therapist and effective therapeutic treatment of the alcoholic.

To treat the alcoholic effectively, the professional worker, with the cooperation of legalists (whether practitioner or jurists), together with understanding law enforcement officials, must disenfranchise their professional conduct and attitude from acceptance of ambivalence, moralism, or pessimism regarding treatment of the alcoholic. It would appear that such attitudes, when they exist, stem from the therapists' refusal or inability to understand or accept the chronic nature of the disease with attendant complex needs and modes of treatment.

When further consideration is given to the attitudes of law enforcement agencies, whether police oriented or court oriented, which embraces the means to an end usually encompassing thoughts of deterring, punishing, avenging a wrong, or rehabilitating the wrongdoer, it can readily be understood that treatment-environment can only be considered in the latter context of rehabilitation. Even then, however, it would appear that traditional training of professionals in nursing, medicine, social work, law, and law enforcement has ignored the alcoholic. In fact, the vast majority of these professionals has only minimal training and contact with the problem.

Thus, the ambivalent social attitudes of the American culture coupled with the professionals' lack of experience and contact with alcoholics leads inescapably towards negativism and produces attitudes tending to produce skepticism relative to the role of the judiciary and the quasi-judiciary functions of various law enforcement agencies. This skepticism in turn leads to rejection of the alcoholic as a patient in certain institutions, or a client under certain prevailing legal applications. Quite frequently these attitudes lead to detoxification efforts in the "drunk tank" of jails or hospitals with minimal attendant care limited to the immediate physical needs of the tolerated and partially accepted alcoholic.

Another human factor is also forgotten when consideration is given to needed treatment of the alcoholic. No rational being desires the classification of being "treated" as a psychiatric pa-

tient, even though psychiatric "consultation" is quite acceptable in most areas of our American culture today. The alcoholic usually resents and rejects the classification of "psychiatric patient." This results in problems surrounding treatment and therapy for the reason that the alcoholic abhors receiving the "same" treatment, or placed in the "same" treating facilities, as the paranoic schizophrenic.

From the foregoing it should be readily deduced that the behavioral sciences must give serious consideration to research dealing with our socio-culture. At the same time, ecological relationships and nutritional stress among various subculture segments of our society must be studied.

If the statistics herein reveal anything, regardless of validity, it is that areas of study beyond sociology (with its insufficient generalities in terms of difference in role expectancies) must be considered. Ecological, biological and nutritional consideration must also be considered within our ambivalent cultural American society.

Since nutritional stresses may be reflected by ecological studies as well as in cultural and biological studies, thought and research should be initiated considering ecological factors as they may be reflected by climate and dietary needs. What is the disease environment that must be endured? What is the food producing potential of the living area? What are the food producing technologies available? How do people under certain ecological conditions prepare food? What are the food habits present? These questions, once answered, could possibly shed light on the ecological involvement.

Other considerations, apart from food supply, could involve climatic possibilities as related to nutritional requirements. As reported by Lewis and Jumping Eagle, cold climates require caloric increase to help keep the body warm and allow for extra energy temperatures.¹⁰ There appears to be a highly significant average increase in basal metabolic rates with decreasing temperatures. Thus, in addition to enhanced caloric needs in cold climates, an increase in fat intake also appears advantageous in preserving body temperatures at levels of needed tolerance.

It is generally recognized that cold climates decrease the need for niacin and increase the need for ascorbic acid. This may be important since fermentation produces ascorbic acid, B-

vitamins and microbial proteins. These food values also become important when consumption of fruit and meat is irregular. Conversely, caloric needs decrease in warm climates, but the need for increase in protein needs, 5-10 grams per day, is present in areas where the climate is hot. Therefore, if alcoholism is considered as a disease, the nutrition-disease relationship may be of considerable relevancy.¹¹

From the foregoing, it appears that the typical emphasis of law enforcement, from the officer on the beat to the judge on the bench, is quite inadequate. Normally, the law considers the following four elements in applying the forces of judicial consideration: (1) protection of society; (2) protection of the individual; (3) deterrent of, or punishment for, the offender who violates the law; and (4) rehabilitation for the benefit of the individual, and ultimately for the benefit of society. Rationally, if society could cope with the latter interest, rehabilitation, all other considerations would pass by the board since there would exist no need for protection, deterrents or punishment.

The approach to the problem of alcoholism through Alcoholics Anonymous, in spite of all denials to the contrary, is psychotherapeutic in nature and practice. Even though some success is readily recognized in the use of the AA method, no real answer to the over-all problem is afforded. Until each individual's problem with alcohol is recognized and treated as a singular problem of that individual, with attendant consideration to the individual's cultural heritage, socio-economic background, ecological nutritional-disease relationship, psychologically evaluated personality traits, it would appear nigh impossible to reach a solution of that individual's problem of alcoholism. Furthermore, it would appear that a singularly identifiable oriented program of treatment disregarding the socio-economic, ethnic, or cultural background of the individual to be treated, dooms the overall program to defeat before it has been initiated. For example, a program based on the philosophical belief of man's proneness to evil without the God granted blessing of strength to resist is quite foreign to the philosophical belief that the manhood of an individual is paramount to existence. Specifically, ascetic Protestantism automatically negates an Indian's value of manhood. Thus, there exists a lack of integration of values and rational orientation to social reality of the individual treated. Stated differently the therapy of an alcoholic

must give consideration to the value conflicts with cross-cultural variables involved. It thus becomes necessary for the successful treatment of the problem of alcoholism to establish cross-cultural exchanges of information and resources. When these are available to treatment facilities and personnel, a possibility exists that from the administrators of justice, to the personnel treating the needy alcoholic and to the law enforcement officers and agents, a truly real rehabilitation of an individual plagued with alcoholism may be initiated.

No longer can the most costly health problem facing America be defined as simply the result of psychiatric conflicts within the individual involved! No longer is it safe for America to view alcoholism as a psychological problem bottomed on immaturity of the alcoholic! No longer can alcoholism be explained in terms stating that the individual alcoholic has failed to develop a capacity to cope successfully with his daily confrontations! No longer can it be quipped that the alcoholic depends on alcohol and uses it again and again to escape the reality of an uncomfortable position or situation! While all of these statements may contain some element of fact and truth, no single statement can be the entire truth. To this date, no accurate scientific description of a "typical alcoholic" has found acceptance. If anything, the lack of an acceptable definition or description of a "typical alcoholic" points up a significant medical-social-legal problem far more complicated than once considered.

It should be recognized that the problems which are related herein are not new. Studies of how alcohol affects the body and behavior are existent. Studies have been made of the symptoms of alcoholism as well as treatment and rehabilitation involving medical treatment and psychotherapy. There has been the evident remarkable success achieved by Alcoholics Anonymous, based on group therapy, emotional support, and the quasi-psychophilosophic approach to the problem of alcoholism.

There are many alcoholism programs of one kind or another; from the in-patient hospital or private clinical sanitarium to primarily outpatient and consultation services. Yet, in spite of the fact that the American Medical Association in 1956 classified alcoholism as a medical problem and urged general hospitals to admit alcoholics for treatment, the usual medical attention

is given at the psychiatric level. Emphasis on initial treatment of physical symptoms followed by psychotherapy or psychological counseling is still the vogue.

Society today is generally tuned to the conclusion that alcoholism is a community and national problem, both in the social and medical sense. The federal government has become increasingly concerned, so that today seven agencies of the Department of Health, Education and Welfare are involved in the study and research areas involved in the alcohol problem. The major effort of government research is centered at the National Institute of Mental Health of the Public Health Service.¹²

Research of the problems of alcoholism indicates the need for (1) new techniques in the rehabilitation of alcoholics; (2) methods to prevent or minimize its damaging effects on the family and social relationships of individuals; (3) methods to prevent fraudulent advertising relative to cures; (4) determining the environmental and ecological factors which play a role in susceptibility to alcoholism; (5) study relating to the metabolism of alcohol, and the effects on the central nervous system; (6) study of the socio-cultural characteristics, including the need for education, acculturation, and social use standards; (7) standards which would be indicative of variables supporting consumption patterns, tendencies toward alcoholism, with possible needed corrective processes; (8) uniform reporting of inter-related information at all levels of governmental and non-governmental institutions; (9) liaison among all agencies researching or treating the alcohol problem; (10) a coordinating agency for all alcoholism programs; (11) a ready data bank source of technical, professional, and lay information relating to problems of alcoholism; (12) training of law enforcement officers, the medical and legal professionals, the judiciary, the psychologists, psychiatric social workers, nurses, and all other personnel engaged in rehabilitation efforts.

If we momentarily reflect that a heavy intake of alcohol can cause changes in the blood and blood vessels, and that brain cells could be destroyed as the result of oxygen stagnation (loss of normal oxygen supply), then it is not surprising that in heavy users of alcohol outward manifestations of brain damage are noticeable by increased forgetfulness and loss of efficient work capabilities.

Dr. Melvin H. Knisely, head of the Department of Anatomy at the Medical College of South Carolina, at the 28th International Congress of Alcohol and Alcoholism held in Washington, D.C., in 1968 stated:¹³

"When his level of social drinking is such that he feels very happy, a man is beginning to kill a few brain cells. The damage is permanent."

In conclusion, it appears that the complex problem of alcoholism presents one classic error in the area of jurisprudence: the treating of the alcoholic as a criminal. The time has finally arrived in Arizona when all enlightened jurists, as well as knowledgeable legislators, have urged the abolition of punitive treatment of the alcoholic. This enlightened view has resulted in legislation which abolished punitive retribution. The totality of the complex alcohol problem as it relates specifically to the individual should now be recognized. There is no singular panacea for the treatment of alcoholism. Each individual must be treated as a unit within the total problem area. Each specific problem must be viewed in the light of the total individual. Recognizing the component factors of cultural heritage, socio-economic environment, ecological and biological factors, psychiatric and psychological stresses, and all other areas involved in the problem of alcoholism may in the near future give the key which will open the door to successful understanding, treatment and rehabilitation of the alcoholic.

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FELTY'S SYNDROME

LEO J. McMAHON, M.D.

OSCAR A. THORUP, M.D.

The summary at the end of an article by Dr. A. R. Felty which appeared in the Johns Hopkins Bulletin in 1924 read as follows:

"Summary

Five cases, strikingly similar in their essential features, are described, presenting an unusual, but unmistakable clinical picture, characterized by arthritis, splenomegaly, and leukopenia. The etiology is entirely obscure, though the various findings seem best accounted for as manifestations of a single disease process."¹

So began the history of Felty's syndrome 50 years ago. Some new information and perhaps some understanding has been added; but the etiology remains obscure, the course vexing to both patient and physician and the treatment controversial.

The question of etiology was raised by Felty who concluded that according to the law of probability alone, coincidence of these various features seemed highly unlikely. There is, however, little unanimity as to the etiology and pathology or its relationship to the various manifestations of rheumatoid disease.

The arthritis in Felty's syndrome has many characteristics of severe rheumatoid disease. Subcutaneous rheumatoid nodules are common; the arthritis is usually of long duration. Polyarthritis in the original cases existed from 8 months to 25 years and recent reviews have confirmed this finding. The arthritis has often run its course when Felty's syndrome appears and there is little or no sign of active inflammation.^{1, 2, 3, 4, 5}

Splenic enlargement is generally moderate; microscopic changes have been variously reported and generally include hyaline changes and endothelial hyperplasia of the follicular arteries, sinus cell hyperplasia with erythrophagocytosis, plasma cell hyperplasia and extramedullary hemopoiesis.⁴ Hepatomegaly is uncommon, but progression to cirrhosis and portal hypertension with esophageal varices has been described.⁶

Skin changes include the description of brown pigmentation over the exposed areas as was noted by Felty and refractory, pre-tibial leg ulcers.^{3, 4, 5}

The incidence and severity of infections in persons with rheumatoid disease are increased over those in the normal population and present a major problem. Recurrent pneumonias, cellulitis and septic joint disease are responsible for considerable morbidity and mortality. Patients with Felty's syndrome have been noted to be susceptible to the pharyngeal and perirectal bacterial infections that are seen in agranulocytic conditions. No particular organisms have been noted; fungal infections are rare.^{3, 4, 5}

Most authors agree that the splenic neutropenia of Felty's syndrome which occurs in 1% of patients with rheumatoid arthritis is unique.^{2, 3, 4, 5} However, patients with rheumatoid arthritis also have deficiencies of the immunologic system other than neutropenia. These include poor granulocyte chemotaxis, depressed bacteriolytic activity of serum and synovial fluid, hypercatabolism of gamma globulins,¹⁶ reduced lifespan of the circulating granulocyte,^{14, 15} and reduced phagocytosis. Recent studies have demonstrated that the latter defect may be related to the ingestion by the granulocyte of immunoglobulin G-rheumatoid factor complexes. Even normal peripheral blood neutrophils exhibit significantly less yeast phagocytic activity in a test system if they ingest preformed immunoglobulin G-rheumatoid factor complexes.¹³

Considerable interest has developed in the serologic findings in patients with Felty's syndrome.⁷ A high incidence (75-100%) of antinuclear factor activity has been found.⁹ In one report in which all sera were reported to show antinuclear factor activity, the antinuclear factors did not fix human complement. The antinuclear factor in nine of ten control sera from patients with systemic lupus erythematosus did fix complement. This difference was not explained by differences in the IgG class nor by a blockage of complement fixation by rheumatoid factor. It was suggested by Brunner and Davis that this difference may provide some

Reprint requests to: Dept. of Internal Medicine, College of Medicine, U of A, Tucson, AZ 85724, (Dr. McMahon & Dr. Thorup).

explanation for the different clinical course of the two disorders.⁹

The variety of disorders that have been associated with Felty's syndrome include hemolytic anemia, Sjorgren's syndrome, psoriatic arthritis, gout, hyperviscosity syndrome and amyloidosis.⁵ A familial association has been noted in one report.

The major arguments that have developed in the literature have been those regarding therapy. The variability of the manifestations of the syndrome make it difficult to assess prognosis in individual patients or the value of any treatment, and no doubt contributes to the conflicting reports regarding the effects of corticosteroids and splenectomy. Recently, most authors have concluded that the effect of corticosteroids in Felty's syndrome may be detrimental and that its use is not indicated.^{4, 10}

Splenectomy has produced variable results.^{3, 4, 5, 11} The initial, favorable hematologic response to splenectomy has been often commented upon; long term results are less reassuring. In one series, patients followed from 1 to 13½ years, splenectomy relieved the neutropenia in 66% with no late relapses. The frequency of infections was markedly decreased in most of the patients with the return of the neutrophil count to normal.¹¹ Others have noted that the decrease in infection was not related solely to relief of neutropenia, but suggested some little understood role of the spleen itself.^{10, 4} Indolent ulcer is also relieved by splenectomy.^{10, 4} In another series of twenty-one patients, the nine untreated patients had a 22% spontaneous remission rate. This was not significantly different from patients treated with splenectomy or corticosteroids.⁴ There have been no adequately controlled series reported and these issues are not settled. Splenectomy remains of unproven value and has a distinct associated morbidity and mortality.³ Should anemia be present and require transfusions or if thrombocytopenia compromises hemostasis, splenectomy may be indicated.^{10, 3} It is not indicated for granulocytopenia without infection. The operation should be considered for patients with recurrent infections when other measures have failed.

Gowan et al¹⁷ studying four patients with severe active rheumatoid arthritis and concurrent neutropenia found that the neutropenia improved concomitantly with the arthritis with parenteral gold salt treatment. This was asso-

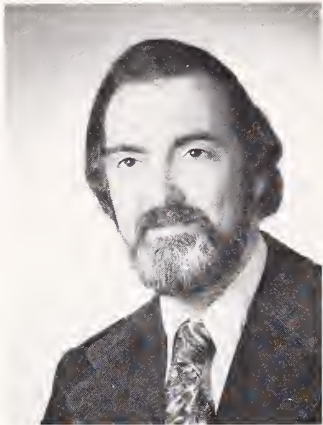
ciated with a decrease in serum rheumatoid factor. However, Felty's syndrome patients often do not have active arthritis at the time neutropenia^{1, 3, 4, 5} and, therefore, are not conventional candidates for gold therapy.

The use of testosterone which has been recently reported to bring about remission of Felty's syndrome should be considered. Testosterone has been shown to increase erythropoiesis and granulocytosis in laboratory animals while reducing bone marrow and thymus lymphocytic cellularity. The volume of peripheral lymphatic tissue is maintained as is immunologic responsiveness.¹² Recently long term administration of testosterone was shown to be of benefit.² The mechanism proposed by the authors is that testosterone commits stem cells to granulopoiesis and causes involution of lymphocytic activity especially in the spleen, thus reducing the production of antinuclear factors.¹²

Continued studies of the effects of all forms of therapy on the course of Felty's syndrome are needed with careful assessment of rheumatoid factor activity, antinuclear factors and polymorphonuclear phagocytic activity.¹³

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HAROLD D. UDELMAN, M.D.

ANXIETY AND ACUTE ILLNESS

THE INTERFACE BETWEEN PHYSICAL AND PSYCHOLOGICAL MEDICINE

It has been helpful to view some industrial injuries as climactic items in a series, the so-called accident process. A similar orientation toward acute illness may broaden and deepen our medical understanding, and this is the theme of Dr. Udelman's paper.

Synopsis — Abstract

The following review of current thinking regarding anxiety relates a fairly evident opinion that acute physical illness, as well as death, may be preceded by prolonged and severe emotional disturbances. The sources of anxiety may arise from crisis or constructive events. Many significant events are distinguishable in the individual's social life six months to a year prior to the onset of acute physical illness. Chronic anxiety relative to stressful life situations is shown to contribute to immunologic change, physiological-autonomic change and other physical symptoms.

It is extremely important to assess the sources of chronic, prolonged stress and anxiety as etiologic factors in the development of acute physical illness. Prophylactic attention to these matters may help in the diminution of such prevalent disorders as cardiovascular disease, psychosomatic disorders, immunologic disorders and perhaps cancer.

The term anxiety is most noted in the expression of neurotic symptomatology in psychiatry. It is, however, a common occurrence in the stress of daily living. With multiplication of responsibilities and increase in frequency of occurrence of both adverse and constructive events in an individual's life, the levels of stress and anxiety

tend to rise. A review of anxiety as it manifests itself in medical illness show it to be most highly concentrated in psychosomatic disorders about which much has been written. However, anxiety and/or depressive manifestations, as physical symptoms, may be presented to a primary care physician via conversion reactions, psychophysiologic disorders, somatic delusions or depressive equivalents. Anxiety and the onset of physical illness are often related. Many studies have been done in an effort to define this more effectively. The usual findings involve severe emotional stress in the year prior to the onset of illness. Multiple physical alterations in the body's mechanisms of defense have been studied relative to stress. This article represents a review of current thinking in regard to anxiety and physical illness.

An association between emotional stress and function of the immunologic system has been noted. "Environmental and psychological factors may, at times, be implicated in the pathogenesis of carcinoma and infectious diseases, as well as autoimmune disease such as rheumatoid arthritis."¹ The previous noted disease entities relate to the immunologic system and its deficiencies. Notable data linking personality factors, stress and the failure of psychological defenses to the onset of acute physical illness have been recognized. There may be nervous and hormonal mechanisms by which stress and emotions relate

Reprint requests to: 333 W. Thomas Road, Phoenix, AZ 85013 (Dr. Udelman).

to specific dysfunctions of the immunologic system. Possible explanation may exist in the stress response of the adreno-corticosteroid hormones evoked by anxiety-laden situations, and having an immuno-suppressive effect. The immuno-suppressive response may thus link stress to the onset of disease. Many researchers, including Dr. Jonas Salk, have speculated on the multifactorial origin of physical illness including behavioral, social, genetic and immune relationships. Experimental studies have shown that various forms of stress may reduce primary and secondary antibody responses in rats, and that adult immunologic responses may be altered by early infantile experiences. Similarly in human experience, illness in children may be preceded by multiple psychological and social changes in family units: divorce, geographic dislocation, etc. in six months prior to the onset of the illness. Some highly charged emotional events have shown an association with the onset of diseases such as carcinoma, rheumatoid arthritis, etc. in relation to loss of primary relationships; inability to express hostility; and unresolved tension relative to a dominant figure.

Fessel has demonstrated that mental stress produces an increase in 19-S gamma globulin, and that there are alternating levels of gamma globulin when a portion of the lateral hypothalamus is stimulated in rats. A destructive lesion of the dorsal hypothalamus leads to complete suppression of complement fixation antibodies and prolonged retention of antigen in the blood.¹

The above data strongly suggest that immunologic responses are altered in relation to acute stress and anxiety. The mechanisms, although unclear at this time, may relate to the immuno-suppressive effects of adrenocortical hormones reactive to severe stress such as loss, unresolved tension or rage. Alterations in resistance may thus predispose an individual to the onset of disease.

The association of thyroid disease and stress is another area in which to evaluate anxiety and the onset of illness. Longitudinal I 131 studies were done on samples of clinically euthyroid patients. Eight per cent of the normal population has been noted to have radioactive hot spots which wax and wane predictably with stress. It is unclear as to whether these hot spots represent precursors to hot nodules. These spots can produce nodular and diffuse hyperthyroidism un-

der chronic, severe stress. Many psychosomatic disorders raise the question of organ specificity and biological vulnerability as a necessary precondition for the development of disease; however, this awaits further exploration. Nonetheless, it is clear that anxiety, when prolonged and severe, can lead to the development of illness.²

The onset of thyrotoxicosis, when measured in relation to decades of life, reveals the following: Psychological stress seems to be the dominant etiologic phenomenon in the second to fifth decades; thereafter, physical stress seems the principal cause. Physical stress and aging are thus dominant features, possibly due to the loss of flexibility in adaptive mechanisms, leading to permanently overactive thyroid. In the noted study, there were undetermined causes which could not be explained on the basis of life experiences. The author of this study did suggest, however, that the individuals who participated were a rather stoic lot and that the failure to find precipitating mechanisms may relate to passive acceptance of their life with its stresses and turmoil, rather than the absence of precipitating stress.³

Presenting symptoms are treated, at times, without an evaluation of underlying causation. It is essential for physicians to examine the patient as a whole, including psychological as well as physical evaluation. One important demonstration of this is in the study of suicide and stress-related dermatoses. Treatment of these patients was limited to management of the dermatitis without exploration of underlying psychological conflicts. Again in this area, it is important to note that the onset of illness related to anxiety; and, that the ability to distinguish this may be prophylactic in dealing with acute illness of a severe psychological nature.⁴

Respiratory illness and stress were studied by Jacobs, Spilken, et. al. Three categories of "life change" seemed relevant in 179 male college students, 106 of whom became ill. The category included: (1) failure and disappointment with a sense of inadequacy and helplessness; (2) separation from, or modification of, relations with key people — family and friends; and (3) rising status and positive achievement. It was confirmed that failure, social isolation and role crisis were associated with seeking treatment for respiratory symptoms. These psychological factors were linked to feelings of tension

and anxiety preceding the onset of illness and the seeking of medical care. It was also found that several diagnostic categories showed different symptomatology with the neurotic patients in this study showing the greatest degree of day to day incapacitation; the asthmatic patients showing the greatest degree of physical incapacity; and the patients with upper-respiratory infections, an intermediate position.⁵

Further studies into the association between anxiety and the onset of illness reveal that predictable stress was much less likely to produce psychophysiologic change than unpredictable stress. This was most predominantly shown in experiments with rats, done by Weiss. Ulceration, changes in body weight, etc., showed greater severity with unpredictable stress, than with signaled, similar stress.⁶ Recent physiologic measurements of urine catecholamines, adrenaline and noradrenaline, have shown that concentration sharply rises in response to mental and physical stimuli affecting the sympathetic adrenal system. As in the experiment with rats, increased adrenaline is noted in situations where shock is unpredictable. Familiarity regarding the stress causes a decrease in adrenal output. An interesting side note is that high adrenaline secretors were found to do better in IQ tests than low adrenaline secretors. The hypothesis established was that adrenaline was secreted in situations characterized by lack of relevant response in behavior patterns, while noradrenaline was secreted in situations that are characterized by reliable patterns of response.

Epidemiologic evidence tends to support, though not prove, that social factors can increase risk of disease by producing stress and demanding either too frequent or too intense adaptations. Physiologic change as the result of anxiety is also evident in the following research. An experiment, documented in the World Health Organization Chronicle, deals with thirty-one army officers who underwent a seventy-five hour session on an electronic shooting range without sleep, relaxation or stimulants. Findings included: elevated sedimentation rate — 168 per cent; elevated PBI — 30 per cent; decreased serum iron — 52 per cent; maximum adrenaline in the urine in the afternoon; and minimum adrenaline after midnight, when shooting results decreased and fatigue increased. There also were notable electrocardiogram changes in about

twenty-five per cent. A second experiment dealt with female clerks whose performance was measured on four consecutive days. Incentive bonuses were added on the second and fourth day, and fixed salary was paid on the first and third days. The bonus days showed an increase in output of 114 per cent with forty per cent adrenaline secretion rise and twenty-seven per cent noradrenaline rise. However, there were increasing somatic complaints during the bonus days. The suggestions in both of the above experiments are that prolonged and severe stress (i.e. prolonged sustained anxiety) is potentially harmful.⁷ Anxiety may be related to sudden and dramatic change for the better, with rapid progression of pleasant and stimulating as well as socially desirable events. Evidence also reveals that the incidence in psychosomatic disorders was vastly changed by catastrophic social events such as war, concentration camps, etc.

Studies of sudden deaths show that intense life events which the victims could not ignore — and to which their response was excessive — were related. Engle found these to include: loss or the threat of loss; loss of status or self esteem; threat of injury after the danger is over; acute grief or mourning; and an anniversary as well as a reunion. He postulates that there is a combination between excessive excitation and capitulation which may lead to a “neurovegetative response” involving the autonomic nervous system and leading to lethal cardiac events.⁸

In all of the above noted studies, physical and psychological events are related. Multiple etiologic factors are, therefore, seen as crucial in determining the onset of acute illness. It behooves us all to reflect on the meaning of these findings in an effort to prevent, as well as comprehensively treat disease.

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PRESENT STATUS OF CHOLECYSTOKININ CHOLECYSTOGRAPHY IN CLINICAL PRACTICE

**M. H. NATHAN, M.D.
ALEX NEWMAN, M.D.**

An evaluation and possible help in a problem that can be diagnostically difficult. The history in these patients remains a most significant factor. Possibly added help will come from cholecystokinin cholecystography, in those cases that are not diagnostically positive on routine cholecystography.

Cholecystokinin cholecystography (CCK-GB) after many years of clinical investigation still remains an investigative study under the control of Health, Education and Welfare. More and more clinical investigations are being carried out, and although some substantiate the usefulness of CCK-GB, there is one report which accepts only reproduction of the patient's pain as a reliable sign of gallbladder abnormality.⁸ Another article by Dunn et al concludes that CCK-GB is of no value, either from a standpoint of reproduction of symptoms or by radiography.

The findings of Dunn et al are based on inappropriately selected controls and their conclusions are therefore misleading. Their normal controls, 14% of whom showed abnormal contractions and 27% of whom developed right upper quadrant pain, included mostly women up to 58 years of age, and did not specifically exclude American Indians in whom there is a high incidence of gallbladder disease, or Latin Americans, many of whom have Indian blood. By contrast, women, individuals over 30 years of age, both of whom have a high incidence of gallbladder

Reprint requests to: Dept. of Radiology, Scottsdale Memorial Hospital, Scottsdale, AZ 85251 (Dr. Nathan) 2601 E. Roosevelt, Phoenix, AZ (Dr. Newman).

disease, and American Indians and Latin-Americans were excluded from our own normal controls in whom there were only about 2.2% abnormal contractions and/or right upper quadrant or epigastric pain.⁶ Dunn et al argued that because the pathological and clinical results were similar in positive CCK-GB (good results in 18 of 19 — 95%) and in negative CCK-GB (good results in 7 of 9 — 82%) that the examination was of little or no value. What these authors failed to consider is the fact that, as in any laboratory or X-ray examination, there are false negatives as well as some false positives and that, in the face of a normal clinical, radiological and laboratory workup and a normal CCK-GB, the physician must have been absolutely convinced of gallbladder abnormality before subjecting his patient to cholecystectomy. This would explain the 82% good results in their false negative patients.

Review of our clinical material over the past eight years shows that approximately 92.5% of patients had good post-operative results when evaluated by the patient's subjective conclusions. All but one of our patients had positive findings on microscopy although approximately 25% had mild changes. It is likely that some of these latter patients had functional abnormalities of the biliary tract such as biliary dyskinesia at the neck of the gallbladder or at the sphincter of Oddi. A recent and extensive investigation by Theander supports the presence of functional abnormalities.³

There were eleven cases in our own series in whom calculi were not shown on the initial oral cholecystogram or later at the time of CCK-GB. Eight of these had a positive CCK-GB and except for this would not have been discovered. Stenosis at the distal end of the common bile duct (CBD) was found in 28 of 260 operated patients. Although CBD stenosis was not demonstrated by oral cholecystography, the diagnosis was made or suspected on CCK-GB. In a recent study by Goldstein et al, a total of eight cases of stenosis of the distal common bile duct was found by CCK-GB among 40 patients with acalculous gallbladder normal on routine oral cholecystography.⁴

The only indication for cholecystectomy in patients with acalculous gallbladder is for relief of the patient's symptoms. Of the twelve patients in our recent series with positive CCK-GB treated by medical management, five exhibited good

results with either complete or partial disappearance of symptoms. In view of this, a more extensive trial of medical management should be evaluated before these patients are subjected to cholecystectomy, and only those patients whose symptoms persist and are severe enough to demand relief should be advised to have surgery. Comparison of 91% good results in the last four years with 94% in the first four years of our investigation suggests that there may have been less careful selectivity of patients for surgery more recently.

Support for our study may be found in the work of Goldstein et al⁵ and of Carratù et al² and Cozzolino et al³ and Freeman.⁴

CONCLUSION

The use of CCK-GB in our hands continues to be an accurate diagnostic study of acalculous gallbladder disease. Eight of eleven patients with missed gallstones on routine oral cholecystography had positive CCK-GB's and 28 cases of common duct stenosis, were diagnosed as suspected on CCK-GB. The latter would be a sufficient indication for performing CCK-GB on all pre-operative cases of gallbladder disease (in which the gallbladder concentrates the opaque medium) including those with calculi since failure to correct CBD stenosis probably is one cause of recurrent post-operative symptoms.

At the same time, it should be remembered that CCK-GB is merely a laboratory study with some false negatives and false positives as in any laboratory study.

A positive CCK-GB represents only part of the evidence for making a diagnosis of biliary tract abnormality and when a diagnosis of acalculous gallbladder disease is based partly on a positive cholecystokinin cholecystogram, a trial of medical management and careful evaluation of the severity of the symptoms are recommended before proceeding with surgery.

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CULTURAL VALUES AND PRODUCTIVITY

Evidence is accumulating that cultural values profoundly affect productivity in both scientific and non-scientific professions and occupations, largely by the attitude and motivation of individuals and groups. Hardy (Sciences, Vol. 185, No. 4150, 497-506, 1974) states: "From the reservoir of talent found in any sizable population, cultural influences operate to stimulate or to dampen, and to channel in one direction or another the capabilities of its members. I suggest that there is a set of cultural values that promote scientific and scholarly activity and that these are found most clearly in the production of scientists and scholars; these values appear to be less pronounced in groups of moderate productivity, and the antithesis of these values is found most clearly among those groups who are least productive of scientific and scholarly workers."

High productivity was observed in individuals who generally held the following cultural values:

1) Belief in a world of order, law, pattern and meaning, underlying the causal mode of thinking which characterizes science (naturalism).

2) Belief in learning, wisdom and knowledge about the physical world, life processes, and the great diversity of human activities.

3) Belief in the dignity of man and his worth for discovery of truth and accomplishing good.

4) Belief in personal dedication, striving on a long-term and purposeful basis, responsibility beyond family.

5) Belief in equalitarian and democratic ideals, empathy for the downtrodden and oppressed, promotion of causes for the disadvantaged.

6) Belief in inquiry, no theory being immune from questioning, and

7) Belief in struggling to attempt to solve problems and to overcome obstacles.

On the other hand, individuals who were in the low productive category generally held contrary beliefs. Their values were:

1) Belief that events are the result of capricious or supernatural forces beyond the understanding of man, thus discouraging inquiry,

2) Lack of faith in learning and education and tendency to be suspicious and anti-intellectual,

3) Lack of faith in man with emphasis on his depravity, worthlessness, incompetence,

4) Belief that life is out of one's control because of fate or luck, leading to passivity to the future and an active interest in using and enjoying what is immediately available, with responsibility being centered on relatives rather than upon community or humanitarian service,

5) Belief in authority, power, aggressiveness and militancy to maintain status quo,

6) Belief in respect for tradition, with suppression of spirit of inquiry, and

7) Belief in a better life in the future (the next life).

The medical profession presents a broad spectrum of service, education, and research. State and national medical organizations, as well as individuals, should interest themselves in these cultural values and how they affect attitude, motivation, and productivity of physicians.

John R. Green, M.D.



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THE MED-START PROGRAM REVISITED

In the summer of 1971 a group of College of Medicine faculty, students, and pre-medical students began an experiential placement program for Tucson High School students of economically deprived backgrounds. Since that summer program of 1971, there has been a continuing development of what has come to be called the MED-START PROGRAM with the genuine purpose of increasing the minority and rural participation in Arizona's health system.

The basic method of the MED-START PROGRAM is early identification, recruitment, motivation and retention, of youth with leadership and academic potential. The vehicle is the structuring of community-medically oriented educational experiences of increasing sophistication. These experiences both demonstrate to the student the need for community-oriented health personnel and show him how his own abilities and professional training can meet this need. Such preprofessional experiences also start early development of the student's health care delivery skills, together with skills in leadership, research, sensitivity to patient needs and to social issues.

These are the underlying assumptions and guidelines used in creating and maintaining the program model: Leadership, confidence and knowledge are achieved through actual experiences; students are allowed to assume as much responsibility as they are capable of handling. Medicine, science and other academic disciplines are not mysteries but are bodies of usable knowl-

edge; the mind and the body are linked, hence the need for "people to people" skills. Non-western cultures have something to contribute to western medicine. Experiential settings allow older students to assess student potential and offer personalized counseling. Students given the proper training and supervision are capable of direct service delivery. Cultural differences must be recognized in giving adequate health care to underserved areas. Students must be allowed to work closely with successful role models; although a student may often need counseling and tutoring, the focus is on his capability for giving help rather than on his need for receiving it.

The program has developed since that first summer to include both an eight week summer program and academic year activities. The summer program consists of three types of training: (1) academic — courses in chemistry, biology and communication; (2) motivational — a seminar program directed at health careers and issues in health care delivery; (3) experiential — there is a thirty-four hour a week supervised job placement program. Each student was placed in a clinical or laboratory setting selected according to the student's professional aspirations.

The academic year programs are in the same three areas of academic enrichment, motivation and experience. These activities consist of health career seminars, high school clubs, student projects and coordination of tutoring and counseling activities.

The basis for the program is experiential, i.e., learning by doing. Students are placed in clinical and laboratory settings to work with health professionals. The experience is carefully monitored and supervised to see: (1) that the student is receiving a meaningful experience and, (2) that the student is placed in a situation he can handle.

Initiation of MED-START PROGRAMS outside Tucson began in the 1973 Summer Program, with local programs in Santa Cruz County, at the Gila River Indian Community at Sells, on the Papago Reservation, and in Phoenix. Each of these local programs was, and is, modified to best fit the several local situations, while remaining within the general scope of the MED-START model. In the summer of 1974, the program activities now include the Tucson program based in the Arizona Medical Center, and programs in Santa Cruz County, Cochise County, the Papago Reservation, the Gila River Indian Community, and in the City of Phoenix.

The number of Arizona student participants in the MED-START PROGRAM has increased steadily since those first 27 pioneer students in 1971.

Number of Participants:	
Summer of 1971	27
1971-1972 Academic Year	368
Summer of 1972	79
1972-1973 Academic Year	602
Summer of 1973	88
1973-1974 Academic Year	575
Summer of 1974	135



Clinical Oncology In Arizona

This new section in Arizona Medicine is specifically targeted to the subject of cancer care in the state of Arizona. Recognition of the importance of cancer management has been underscored by the establishment of the conquest of cancer as a national goal. In this column, current concepts in cancer management and recent advances in cancer research that are relevant to Arizona, will be discussed each month. Cancer therapy is currently changing at an extraordinarily rapid rate, and the views expressed on this page should not be considered as static recommendations. The editors of this column will select key topics and invite interested physicians and allied health professionals from Arizona to write components related to areas of their expertise in cancer.

Editors: Paul H. Duffey, M.D., F.A.C.P., Hematology-Oncology, The Tucson Clinic, Tucson, Arizona 85716; Sydney E. Salmon, M.D. Professor and Head, Section of Hematology and Oncology, University of Arizona College of Medicine, Tucson, Arizona 85724; Robert H. Thoeny, M.D., Dir., Radiation Oncology, Good Samaritan Hospital, Phoenix, Arizona 85006.

EVALUATION AND TREATMENT OF MULTIPLE MYELOMA AND RELATED DISORDERS

SYDNEY E. SALMON, M.D.

Multiple myeloma, which we now recognize as a malignant plasma cell disorder arising from a single transformed cell from the B-cell series of lymphocytes was first described over a century ago by several English workers,¹⁻³ one of whom was Sir Henry Bence Jones. Although Sir Henry claimed the proteinuria in such patients was the "hydrated deuterioxide albumin," we now know that he was testing the heat properties characteristic of certain light chains of immunoglobulin molecules. Although the monoclonal immunoglobulin (M-component) abnormalities present in the serum and/or urine of such patients are of diagnostic importance in approximately 99% of myeloma patients, the major features of the malignancy are related to the tumor

Reprint Requests to: The Section of Hematology and Oncology, U of A Medical Center, Tucson, AZ 85724 (Dr. Salmon).

cells themselves, which have a penchant to infiltrate the bone marrow and adjacent bones, often leading to bone pain and anemia. The major clinical features of myeloma are summarized in Table I, and contrasted with those of macroglob-

Table I
Differential Features of Myeloma and
Macroglobulinemia

	Multiple myeloma	Waldenström's Macroglobulinemia
Clinical features	Anemia Bone pain* Lytic bone lesions Hypercalcemia* Renal insufficiency* Recurrent infections Amyloidosis Weight loss Plasma cell	Anemia Lethargy Hepatosplenomegaly Lymphadenopathy Retinal hemorrhages* Bleeding tendency Hypervolemia* Hyperviscosity
Predominant cell type		Plasmacytoid lymphocytes
Serum protein electrophoresis	Spike	Spike
Serum M-component	IgG, IgA, IgD, IgE; κ or γ	IgM; κ or γ
Urinary M-component	Bence Jones (κ or γ)	Bence Jones (κ or γ)

*Characteristic clinical features.

ulinemia of Waldenström, the second major (and less common M-component secreting B-cell neoplasm. Myeloma is an important diagnostic consideration in patients who present with bone pain, severe anemia, recurrent infection, hypercalcemia, or proteinuria in the absence of hypertension. Approximately 60 new cases will be diagnosed in Arizona within the next year. Moreover, approximately 95% of patients who present with what appears to be a solitary plasmacytoma are subsequently proven to have multiple myeloma, and it is therefore wise to consider plasmacytoma as a potentially disseminated neoplasm from the outset, and act accordingly.

Patients with monoclonal gammopathies" (multiple myeloma, macroglobulinemia of Waldenström, and heavy chain diseases) may have similar findings on bone marrow examination and on electrophoresis of the serum and urine.

Inasmuch as both the patient's diagnosis and therapy depend on the correct immunological classification, such specialized testing as immunoelectrophoresis of the serum and urine is required so that the patient's disorder can be properly classified. "Spikes" on serum electrophoresis are occasionally seen in other B-cell neoplasms such as chronic lymphocytic leukemia, or non-Hodgkin's lymphomas, but are generally less than 3.0 gm/100 ml. Such disorders are immunologically similar to myeloma, but in general the tumor cells have monoclonal immunoglobulin detectable only on their surfaces and do not usually secrete the protein into the plasma. Occasional patients have "benign monoclonal gammopathies," this is, a serum M-component of less than 3 grams/100 ml unassociated with any significant abnormality in the blood, lymphoid tissue, bones (e.g., lytic lesions) or bone marrow. The only way that such patients can be considered to have a "benign" disorder, is if the serum spike does not increase quantitatively with serial measurements over months to years. Specific hematology-oncology consultation is definitely indicated in such problem cases. All patients with monoclonal gammopathies (either benign or malignant) should also have their normal serum immunoglobulins measured quantitatively at least every four months. Humoral immunodeficiency manifested by hypogammaglobulinemia and a predisposition to recurrent bacterial infection is common in such patients. Patients who present with Bence Jones proteinuria should all be considered to have a malignant disorder.

Staging of Multiple Myeloma

Recent immunologic studies carried out by the medical oncology staff at the University of Arizona have clearly quantitated the amount of tumor in the body of patients with multiple myeloma.^{4,5} The conclusions of these studies are that "early" cases have at least 300 billion tumor cells in the body (3×10^{11} myeloma cells) at the time of diagnosis. Advanced cases with multiple

lytic bone lesions may have as many as 4 trillion (4×10^{12}) cells — about 4 kg of tumor in the body. Such staging information has been out of considerable importance, because prognosis and survival has definitely been shown to correlate directly with the measured tumor cell mass. Serial measurements of tumor mass are invaluable in the assessment of response to chemotherapy. The latest development in this research has been the development of a clinical staging system which permits approximation of the extent of tumor in the body from readily obtained tests such as the hemoglobin, serum calcium, M-component concentration and bone x-rays.⁵ An abbreviated form of this staging system is shown in Table II.

Table II
Clinical Staging System for Multiple Myeloma

Stage	Criteria	Myeloma cell mass (cells $\times 10^{12}/M^2$)
I	ALL of 1. Hemoglobin > 10 gms% 2. Serum calcium normal 3. On x-ray normal bone structure or solitary lytic lesion only 4. Low M-component production rates a. IgG < 5 Gms% b. IgA < 3 Gms% c. Urine light chain < 4 Gms/24 hrs. (electrophoresis)	$< 0.5 \times 10^{12}$ (Low)
II	Fitting neither criteria of I or III	$0.5 - 1.2 \times 10^{12}$ (Intermediate)
III	ONE or MORE of 1. Hemoglobin < 8.5 Gms% 2. Serum calcium > 12 mg% 3. Advanced lytic bone lesions 4. High M-component production rates a. IgG > 7 Gms% b. IgA > 5 Gms% c. Urine light chain > 12 Gms/24 hrs. (electrophoresis)	$> 1.2 \times 10^{12}$ (High)
A or B	A = Relatively normal renal function BUN < 30 creatinine < 2 mg% B = Clearly abnormal renal function BUN > 30 creatinine > 2 mg% M ² = square meter of body surface area 10 ¹² cells = approximately 1 Kg or 2.2 lbs. Examples: A patient staged as IB has a low tumor mass and impaired renal function. A patient staged as IIIA has a high tumor mass and normal renal function.	

Treatment of Multiple Myeloma

The development of cytotoxic chemotherapeutic agents has clearly made a favorable change in the prognosis of patients with multiple myeloma and related disorders. Treatment is neces-

sarily multidisciplinary, and often requires close interaction of hematologist/oncologists with radiation therapists and orthopedic surgeons. The mainstay of treatment is the use of cancer chemotherapy with alkylating agents.

Symptomatic patients often present with multiple problems simultaneously, e.g., bone pain, fractures, hypercalcemia, anemia, pneumonia and renal failure. It is therefore essential that comprehensive patient care be available right from the outset. While diffuse bone pain usually responds to chemotherapy, localized pain at sites of lytic lesions or compression fractures generally responds well to localized radiotherapy and may lead to bone healing in irradiated areas. Extended field radiotherapy should be avoided, because it often limits the patient's tolerance to systemic chemotherapy. Patients with "impending" fractures of long bones in weight-bearing areas should have a consultation with a radiotherapist for "prophylactic" radiation to prevent overt fracture or collapse. Fractures of long bones (e.g., femur) should be promptly treated with internal fixation so that the patient can be mobilized rapidly and receive local radiotherapy: allowing myeloma patients to remain immobilized in bed can lead to exacerbation of hypercalcemia. Hypercalcemia is a potentially lethal complication, and must be treated aggressively (IV fluids, steroids, mithramycin, and the initiation of chemotherapy for myeloma). Infection is usually due to common gram positive organisms (e.g., pneumococcus). Prompt institution of bactericidal antibiotics (generally penicillin derivatives) is warranted when fever or cough are manifest, and baseline cultures have been obtained. While anemia is common, it is usually not a limiting problem; initially packed red cells are often useful, but induction of a remission with chemotherapy, and/or the addition of androgen therapy generally eliminates transfusion requirements. Renal failure in myeloma patients is potentially reversible, it is usually secondary to either hypercalcemia, Bence Jones proteinuria, hyperuricemia, infection or amyloidosis, or a combination of these factors. Therefore, appropriate supportive care with regard to renal insufficiency is indicated and should be continued during induction of a remission with chemotherapy.

Prior to the era of chemotherapy, the median survival of patients was approximately 12 months. The use of alkylating agents has more

than doubled that median survival figure and because only about 70% of patients show significant objective improvement, the median survival in that group is approximately three years. I have several patients who are still in remission after seven or more years of chemotherapy. Objective response can be quantitated with serial electrophoretic measurements of the serum and urinary M-components, and improvement in these immunologic parameters is associated with relief of symptoms such as bone pain and hypercalcemia as well as improved survival. The prolongation of survival with chemotherapy definitely adds to useful survival, because the patients are by and large asymptomatic during the remission period. Patients whose therapy is initiated when the disease is still in relatively early status (less than 10^{12} myeloma cells) have the best prognosis of all, and it is therefore wise to always initiate chemotherapy as soon as the diagnosis of myeloma is definitely established, even though bony lesions may not be present. Remission induction therapy has been relatively well standardized to a regimen consisting of intermittent "pulse" courses of melphalan (1 mg/kg over four days) and prednisone (100 mgm/day for four days) administered every six weeks either alone or in combination with other cytotoxic agents.⁶⁻⁷ These dosage regimens are relatively simple to administer, beneficial in the majority of cases and can be considered "standard therapy." However, most patients eventually develop drug resistance and renewed myeloma growth occurs. It is therefore my practice to use new drugs from the outset and add them to the basic alkylating agent-prednisone type of remission induction chemotherapy in attempt to increase the quality of remission and delay the development of drug resistance. As part of a controlled study in the Southwest Oncology Group, we have added BCNU and/or cyclophosphamide or adriamycin to the induction therapy with melphalan-prednisone. These new regimens appear to induce more rapid remissions, and are intended to develop more effective treatment of myeloma. Once a patient enters a good clinical remission, the total body tumor mass is reduced to only 1 to 5% of that present at the time therapy was started.⁴ It therefore appears wise to continue maintenance treatment indefinitely in responsive patients, as discontinuation of therapy is associated with relapse. Current standard therapy is not curative and leaves a "plateau level" or residual

tumor. Thus, there is clearly a need for further improvement in treatment. Because research in myeloma is so closely intertwined with clinical practice, our center now routinely tests bone marrow cells of each myeloma patient against a whole battery of drugs which may be of use eventually to improve initial treatment or for investigational trials in patients who are in relapse. Such studies have indicated that vincristine, adriamycin, BCNU, hydroxyurea, and chromomycin A₃ all may be useful in refractory patients. Cyclophosphamide is occasionally of use in myeloma patients who have become refractory to melphalan.

Treatment of patients with macroglobulinemia need not be this aggressive. Such patients have an average survival of in excess of three years without therapy and often enjoy long remissions of symptoms with single agent therapy with chlorambucil. New therapy is therefore reserved only for refractory cases.

This brief discussion of our treatment and research program would not be complete without mention of one resource which has its headquarters at Arizona Medical Center. This is the "Myeloma Study System," a quantitative system for staging and serial follow-up of myeloma patients through the interaction of a time-sharing computer system (General Electric Mark III System), which is available nationwide.⁵ Outside of Arizona, current "users" of the system include the M. D. Anderson Hospital and Tumor Institute in Houston, the Sloan-Kettering Memorial Cancer Center in New York City, the University of California, the Cleveland Clinic, and the Scott and White Clinic in Texas. In each of these participating institutions this system provides the practicing specialist a precise system for follow-up of their myeloma patients. This data system has proven to be not only an important research tool, but also a major asset for day to day management and decision-making about myeloma patients.

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THOUGHTS ON INTRAUTERINE DEVICES AND PREGNANCY

C. D. CHRISTIAN, M.D.

The tabulation results of the Center for Disease Control questionnaire regarding IUD complications indicate that there are many more, and many more serious pregnancy associated complications than we had previously recognized. Of 3,473 net and unduplicated case reports of women hospitalized in the first six months of 1973 with IUD complications, some 999 or 29% were pregnancy related. The total absolute number of complications and the relative number that are pregnancy related comes as a surprise to us as individual physicians. Of even greater concern is the fact that a relative excess of Dalkon Shield* IUD's was reported among the pregnancy related cases. The 999 pregnancy related cases contained 538 (53.9%) associated with the shield type device and 461 (46.1%) for all other IUD's. These figures tend to confirm our impression that the shield type device has been associated with more and more serious pregnancy complications, (see recent report of Five Maternal Deaths — Four associated with the shield, and Seven seriously ill mid-trimester septic abortions — Six associated with the shield).

As of 8/1/74, the Food and Drug Administration had collected 174 mid-trimester septic abortions associated with the shield type device and has less than 10 associated with other devices (this includes only pregnancies with the device in-situ and excludes perforations, etc.) It seems clear then that the incidence of pregnancy related problems is greater than we previously thought and certainly when the shield type device is in place.

*Trade name: A. H. Robins, Co., 1407 Cummings Drive, Richmond, VA 23220.
From: Arizona Medical Center, Tucson, AZ 85724.

The main question then, for those of us that see patients one at a time and not in lots of one to three thousand, is how should we manage the pregnancy associated with an IUD or the IUD associated with a pregnancy. If a patient becomes pregnant with an IUD, she should see her physician as soon as possible. If the strings of the IUD are visible, it should be removed (evermore true for the shield device). There is accumulating evidence that a pregnancy has a better or as good a chance of continuing if the device is immediately removed and certainly the risks attendant thereto are considerably less. The patient should certainly be apprised of our concerns and a strong infection warning given should she elect to leave the device in place. Further, if the strings of the device are not visible, I think the patient should be offered an elective interruption of the pregnancy based on our concern regarding the subsequent course, but certainly it remains her choice. We have not advocated interrupting all such pregnancies but a strong case could be so mounted, and there are institutions that have adopted such a policy. It is important to realize that if the strings are not visible, it may be because of a perforation (and that peritoneal infection and/or bowel complications may ensue) as well as because of a high fundal position with intrauterine retraction of the strings accompanying uterine growth.

The "nervous" part of following such patients who have IUD associated pregnancies is the insidious yet rapid manner in which sepsis presents. In the four maternal deaths reported with the shield, the patients had only scant brown

vaginal spotting with no localizing uterine signs of infections prior to becoming systemically ill with sepsis. These patients complained only of such things as "flu" or "sore throat" prior to the development of the high temperature elevations and fulminating gram negative sepsis. Three additional shield associated maternal deaths have come to light since the above noted report. These three were from North Dakota; Key West, Florida; and Stone Gap, Virginia and all apparently exhibited the rapid onset of sepsis, disseminated intravascular coagulation and death.

Once a patient presents with signs of infection associated with an IUD pregnancy, the problems of ensuing acute gram negative sepsis and possible coagulopathy must be anticipated. Only rapid evacuation of intrauterine contents (IUD and products of conception) is adequate and effective therapy. Suction D & C with large bore tubing and adequate vacuum is the preferred modality, even in the mid-trimester pregnancy. Most infected uteri are quite sensitive to oxytocin. Intra-amniotic prostoglandins in addition may hasten expulsion of products of conception. When these measures fail, early on-hysterotomy to empty the large uterus may be necessary if imminent delivery from below cannot be reasonably anticipated. In the presence of gross infection, hysterectomy to remove the perforated or infected uterus and contents is mandatory. Radical as the above may seem, at this point in time, experience dictates such aggressive therapy if we are to save the lives of these threatened young women.



Editorial

SANITY, PART II



WILLIAM B. McGRATH, M.D.

Before you define something you give it a name. Until then, as we have elsewhere pointed out, everything out there is nameless and inert, unborn. By naming and defining something, by assigning it its purpose, you breathe into it its soul, its very existence. This piece of metal will be a sword; that will be a ploughshare. This plot of ground will be a garden; that will be a cemetery.

There is a line from an ancient Greek tragedy: "By use to render it mine own." It is worth pondering. Anything acquired, whether by gift or achievement, never really belongs to you until you put it to use. Examples would range all the way from a graduation present, such as a wrist watch, to a license to practice a profession.

A point had better be clarified before we move on. Use is distinguished from exploitation, of course, by mutual willingness and reciprocity.

When a friend begins to use you as a friend, he is promoting you from inferior status as a stranger or an acquaintance. The fact that he no longer has to observe the amenities is a compliment to you and a validation of your friendship. You and he can now skip the polite formalities and never again keep score.

Parents create the child and the child creates the parents. The battered child often involves the one who cannot seem to use the parent as a source of solace. The child who will not eat or

stop crying or otherwise be comforted is battering the parent. And the parent lashes back. When a child takes advantage of you he is proving more so his love for you than yours for him. What if he did not use you as a parent? What if he expected nothing from you, made no demands on you? You would turn to stone!

You are a doctor. It would be a kind of suicide if you refused to let people use you as a doctor. Contrariwise, if patients decide not to use you as a doctor, you no longer exist. They have annihilated you.

Each of us has more than one identity, more than one purpose, more than one soul. To be ignored or unused in a significant role is to be starved to death. Suppose a man quits loving his wife. What does that mean? He gradually stops using her as a wife. He does not expect her to wait on him or fix his breakfast. He will not ask her help in choosing his wardrobe or in entertaining his friends. He doesn't bother her with his boastings and self pity. By conveying that he has no further use for her he is telling her with cruel emphasis that he does not even like her. Her former functions were like candles. As he extinguishes them, one by one, he leaves her in darkness.

The schizophrenic makes little or no use of his environment. The pictures in his gallery are all turned, face to the wall. By repudiating us, by having no use for us, he casts a shadow on some aspect of our own existence. This is one

of the sources of antagonism toward the mentally ill.

The neurasthenic conserves his energy — mental, physical, sexual — expecting it to accumulate. Some parents and even some physicians foster this notion: "Don't play too hard in the hot sun." "You had better take it easy." They are so very wrong. The batteries are charging when the machine is in motion. Strength comes only from the use of strength. Accursed be those rancid preachers who taught us not even to enjoy our own bodies.

Cursed too be those influences and conditions which forbade us to reach out for the many environmental sources of happiness which have been or which are since becoming, available to us. Apprehensive parents, gloomy religions, cry-baby propaganda (much of it pharmaceutical advertising as well as editorial and political doomsaying), — all conspire to domesticate us, to keep us tame. We await some permission, some invitation to feel at home in the world.

No; the world will be as hospitable as we make it. It is our world, not theirs. May we offer a small illustration, almost a motto? If you do not make use of the various facilities of your medical society, then you belong to it. If you do use your medical society then it happily belongs to you.

We have arrived at a definition: To love someone or something is "by use to render it mine own."



*Department of
Health Services*

EMERGENCY PARAMEDICS IN ARIZONA



JAMES L. SCHAMADAN, M.D.

Ask any kid under ten years old what his favorite Saturday night TV program is and you'll hear about *Emergency*. *Emergency* is produced by Jack Webb, the man who brought *America Dragnet* and *Adam 12*, and in the Webb tradition, is also about white-knight civil servants of Los Angeles County. In this case, the program centers around firemen-paramedics and their exploits in saving the lives of Los Angeles citizens. Faithfully watched by thousands of kids and parents, this TV show was a major influence in getting public support for paramedic programs. Dr. Jim Lewis, a cardiologist friend of mine at Harbor General Hospital, started the project several years ago and I recently got to ride the rescue vehicle during the busy afternoon and late night shifts. It's a very efficient and professional operation.

Actually, the first mobile emergency care unit was developed in Russia in 1964. Other countries soon saw the worth of such a mobile unit and established similar systems. In 1968, the United States began to develop mobile emergency rooms, not only to treat heart disease but for all emergency medical situations. These mobile units were frequently staffed by firefighter-paramedics. Finally, in 1974, the need for a mobile emergency care system and for the paramedic was recognized in Arizona.

House Bill 2001 was passed by the Legislature and signed into law by the Governor on June 27, 1974. The Bill:

1. Authorizes instruction and training of emergency paramedics by certain health care facilities or educational institutions.



2. Prescribes the use of paramedics and the duties they are permitted to perform in the delivery of health care.

3. Provides that "any city, town, or county of this State may budget for and expend monies for participation in emergency paramedic programs."

I feel the paramedic will be only as good as his training, direction, attitude and concern. The role of the Department of Health Services will be to certify the paramedics by first setting standards for training and performance and then by written and/or oral examination, field observation and background checks. Furthermore, the Department may certify local paramedic training programs. These programs must consist of at least 500 hours of training or equivalent experience and must include didactic and clinical experience in a cardiac care unit and in emergency vehicles.

Once certified, the paramedic may give care to the sick and injured at the site of an emergency, during transport to a hospital, and while the patient is in the emergency department of the hospital until the regular hospital staff assumes care. The paramedic may be employed by municipal rescue services, ambulance services, or hospitals.

The Department of Health Services will develop criteria for review and evaluation of existing and proposed paramedic programs and will prepare for the next Legislature a plan to utilize paramedics in a statewide emergency medical service system. The plan and implementation of



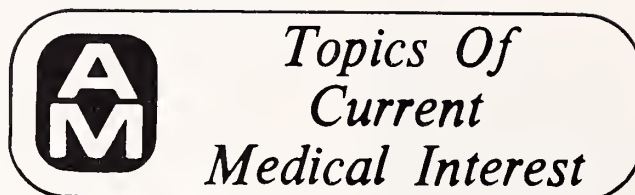
the system will be a cooperative effort of the Department of Health Services and the Department of Public Safety.

Emergency physicians and nurses in Arizona have strongly supported the establishment of a paramedic program. The paramedic will work under the direction of a physician through voice contact and may utilize telemetered electrocardiograms. When direct communication with a physician is maintained, the paramedic may follow physicians orders to do the following: perform defibrillation; administer intravenous saline or glucose solutions; perform gastric suction by intubation; perform esophageal intubation; perform endotracheal intubation and suction; and administer parenteral injections of certain drugs. The law also provides that no physician or registered nurse who in good faith gives emergency instructions to a paramedic at the scene of an emergency shall be held liable for any civil damages as a result of issuing the instructions.

The Arizona Medical Association has been asked to appoint a multi-disciplinary committee to work with our Department to provide medical advice and input into planning the entire paramedic project.

Development and implementation of the paramedic project is under the direction of Suzanne Dandoy, M.D., who heads our Division of Community Health Services. Copies of the Paramedic Act can be obtained from ArMA headquarters in Phoenix.

Next month, as promised, this column will be dedicated to emissions!



A SHORT OVERVIEW OF THE MENTAL HEALTH SERVICE ACT

JAMES L. SCHAMADAN, M.D.

Although not widely publicized by the news media, the State Legislature in its last regular session passed a bill which substantially changed the mental health laws of Arizona. The act, more commonly known as Senate Bill 1035, primarily deals with those persons within the State who are impaired by a mental disorder *and* who are unable or unwilling to seek treatment on a voluntary basis.

In order to provide involuntary hospitalization for these individuals, the law provides that a) they must represent a danger to themselves or to others, or b) be so debilitated by a mental disorder that they cannot provide their basic needs for food, clothing, or shelter. (These individuals are termed the "gravely disabled")

The new law provides detailed procedures for the involuntary evaluation and treatment of the mentally disordered and the gravely disabled and eliminates many of the inequities found within the old mental health act. For example, persons will no longer be required to undergo hospitalization and treatment because they are a danger to the property of others; nor will they be hospitalized for a thirty-day period of observation simply because there is the likelihood that they may be suffering from a "mental illness."

The new law requires that individuals meet a two-fold test before they may be involuntarily hospitalized: *First*, they must be mentally dis-

ordered, which within its own definition specifically excludes those persons who are suffering from drug abuse, alcoholism, or other character and personality disorders characterized by antisocial behavior patterns, including disorders resulting in deviant sexual acts or unusual sexual behaviors; and *Second*, they must overtly manifest a danger of inflicting substantial bodily harm upon themselves or others. If they do not meet *both* of the aforementioned criteria, individuals cannot be subjected to the intricate system of evaluation and treatment provided in Senate Bill 1035.

The system with its many judicial safeguards was designed to protect the constitutional rights of those persons subjected to a loss of personal freedom through involuntary hospitalization. To achieve the desired treatment for those individuals unwilling or unable to accept voluntary mental health services, the following steps must be taken.

Application for a Petition for Court-ordered Evaluation

The law provides that any responsible person (any persons who has reached the age of majority and is competent) may apply for a petition alleging that there is an individual in the county who, as a result of a mental disorder, is either a danger to himself or others, or gravely disabled.

This application must be made to a screening agency licensed by the Arizona Department of Health Services and designated by the county to provide such services.

After accepting the application, it is the responsibility of the screening agency to conduct a pre-petition screening of the alleged mentally disordered person to determine whether there are sufficient facts to sustain the application and, consequently, to petition the court for evaluation. During the screening process, the persons will be allowed to remain in his home or other place of his choosing. Also, the individual conducting the pre-petition screening should encourage the person to seek voluntary evaluation of his condition if there are facts sufficient to find a mental disorder and dangerousness.

If the person refuses to submit to voluntary evaluation, the agency will then file the petition for evaluation along with the pre-petition screening report with the Superior Court.

Court-ordered Evaluation

After filing of the petition the court must then decide, based upon the evidence presented, whether there is reasonable cause to believe that the person is mentally disordered and a danger to self or others, or gravely disabled. If the court finds that the person is likely to be a danger to self or others, he may be taken into custody and evaluated at a licensed mental health evaluation agency designated by the county. If the court finds that there is reasonable cause to believe that the person is a danger to self or others, or gravely disabled, but *is not* likely to present a danger to self or others, the court may order evaluation at a designated time and place.

When the person fails to appear for court-ordered evaluation or is ordered by the court to undergo immediate evaluation, he may be delivered to the evaluation agency by a police officer.

Upon hospitalization for court-ordered evaluation, the evaluation agency must within 72 hours, evaluate the person and recommend one of the following:

1. that the person be released because he is not a danger to himself or others, or gravely disabled;
2. that the person is a danger to himself or others and should undergo court-ordered evaluation: or

3. that the person is gravely disabled and should have a guardian appointed.

Emergency Evaluation

A person may also be involuntarily hospitalized for a period not to exceed 24 hours, without the filing of a petition for evaluation, when an *emergency* exists and the person refuses to submit to voluntary evaluation *and* an order of the court cannot be obtained in time to prevent the person from harming himself or others. If a person is brought to a designated and licensed evaluation agency on an emergency basis, an application for admission must be filed by an individual having knowledge of the facts establishing the mental disorder and the extreme dangerousness displayed by the person. Upon admission, the evaluation agency must conduct its evaluation of the person within the requisite 24 hours and file a petition for evaluation with the court, or the person must be released or undergo further treatment on a voluntary basis.

Court-ordered Treatment

A person who has been evaluated either through the normal process or by the emergency procedure may be ordered by the Superior Court to undergo up to 180 days of treatment in a designated and licensed mental health treatment agency. The decision to have a person undergo court-ordered treatment must be based upon clear and convincing evidence that the person is mentally disordered and a danger to himself or others. The law requires that such a ruling be made at a hearing where the alleged mentally disordered person is represented by counsel and has the right to call witnesses on his own behalf and cross-examine those persons petitioning for his court-ordered treatment.

If the court does not find sufficient evidence to conclude that the person is dangerous, it may, alternatively, find the person gravely disabled and commence proceedings whereby the person can be declared incompetent and have a guardian appointed. The guardian shall thereafter seek the appropriate psychiatric care and treatment needed to restore the person to competency.

Prospective rules and regulations pertaining to the operation and standards for screening agencies, evaluation agencies and mental health agencies are presently on file with the Secretary of State. For more information you may wish to contact Willis H. Bower, M.D., Assistant Director, Behavioral Health Services, at 271-4525.

ARIZONA MEDICAL ASSOCIATION ARIZONA REGIONAL MEDICAL PROGRAM'S HEALTH MANPOWER RECRUITMENT PROGRAM: AN OLD AND GOOD IDEA BROUGHT TO LIFE

TED McFARLAN

The following is a report made to the Health Manpower Committee of this Association about the first six months operation of a program designed to help solve the physician distribution problem in Arizona. While the concept of what is being done is not new, it has not been possible in the past to implement the program because of a lack of funds.

The Arizona Regional Medical Program has now been able to provide the funds for staff and necessary travel expenses to bring life to a good idea.

The reasons why physicians do not flock to rural areas are many — too many to list here. Experience has shown that it is helpful to have a catalyst to get the "community" and the prospective physicians and his family together. This program is that "catalyst."

The program is new, but as you will see when you read this report, it has great potential. The report was made by Mr. Ted McFarlan, Program Manager for the program.

This program started on the day after New Year's, 1974, when we formed our work group, which consisted of Bruce E. Robinson, Executive Director, ArMA, Paul Boykin, from the Board of Medical Examiners, Bill Ivey and Dr. Eleanor Jacqua from Regional Medical Programs, myself, and a very remarkable gentleman by the name of Frank Mangin, who worked with the Economic Development Program of the Valley National Bank. Mr. Mangin had written his Master's thesis on the State of Arizona — I believe at that time he was at the University of Oklahoma. He had traveled extensively throughout Arizona, and had studied the power structure of all the small communities in the state. He had amazing resources upon which to draw to help us in setting priorities.

At that time some of the communities that we felt needed help were Springerville-St. Johns, Snowflake, Coolidge-Florence, Globe, Bagdad (having difficulty at that time), Winslow, Eloy, Bullhead City, Holbrook, Gilbert, Yuma-Somerton, Parker, Safford and Superior.

These priorities have shifted some since then. There are always dynamic forces which affect planning — but as we started out these were the ones we felt deserved our first attention. These aren't all places without doctors, they include areas that we considered underserved — perhaps needing more doctors, although some had none at all. They were sort of brainstormed, and were established on the basis of the knowledge of the people on the work group. As the program developed, contacts were made with the local people and physicians already practicing in the areas.

The first place we contacted was St. John's, which was felt to have the worst problem. We had a request from Representative Jack Brown, a native of St. John's, who felt that they really needed immediate attention. Dr. Melick and I traveled to St. John's and met with the town council. They had the idea in their minds that they should have a doctor, and that their popu-

lation was such that they could support one. However, it appeared to us that the size of the town just didn't justify a doctor. In talking to the hospital board at nearby Springerville, we found that Dr. Erhart had already made connections, and had recruited one physician and was promised a third and fourth who would be very willing to go into St. John's on a rotating basis — a three times a week circuit-riding system — to provide care to the people there.

To digress a moment, let me explain something about our operation. There are three of us in the Arizona Regional Medical Program working on this project. The state is roughly divided into three regions. I am serving the northern counties. Mrs. Phyllis Reifurth, who is stationed in Tucson, has the southern counties, and Mr. Seth Linthicum is working in Mohave and Yuma counties. Our program includes site development and site improvement, and also arranging transportation of patients to sources of medical care — or bringing medical care to patients.

In line with the above, we looked at the old hospital in St. John's, and found that it would lend itself quite well to a clinical facility. So rather than look for a doctor for that area, we concentrated on updating the site, with Dr. Erhart and his associates providing the care.

It was most interesting to see the situation resolve itself. Evidently these possibilities had never been discussed before, and the people at St. John's had had the feeling that they wanted their own doctor and that this would be the only answer. Dr. Erhart was quite surprised to find out that they would be willing to have him serve them, even if on a part-time basis. This kind of network relationship begins to develop when you get the doctors and community working toward a common goal.

All of these communities come up with their own sets of options so far as practice opportunities are concerned. We work strictly with community groups, which vary in size from a dozen down to five or six. Where there is a doctor in the community, he is always involved. We try to get comprehensive health planning people involved, and we get people from the school boards, anybody who can have input and is able to act as a reception committee, who can host the doctor and his family if we can bring them to the community. The source that we have for candidates comes from the files of the Arizona

Medical Association. We look at those who want to come to the state, I contact them with an offer to pay their expenses to get them to the community for a visit. The community group is organized and the doctor is turned over to them to do the selling job on him.

We had come very close to finding another doctor for Holbrook, but I understand there has been a recent development in terms of the Samaritan Health Service underwriting the Holbrook Hospital, which has now changed. They *were* offering a doctor the possibility of construction of a new four-doctor clinical unit, a guaranteed minimum, and a number of other emoluments that made it very attractive. That has changed — and the offer we now have is to go into practice with another doctor in the community.

Williams was another area that asked us for help. They had a hospital that was closed down, and which fell far short of accreditation. The Lutheran denomination has given them an infusion of money and has appointed a staff and a professional administrator and they are starting to do all kinds of renovation which will bring it up to accreditation standards. There is Dr. Lorraine Biswanger, a Harvard-trained, Boarded surgeon, who came to Williams and started doing general practice. She wasn't intending to do that, as she had thought she would be doing general surgery, but she found she was the only doctor. The community paid doctors to come up for the weekends and spell her off so she wouldn't collapse. At about this time we had a doctor who had done a stint of military duty and who is finishing a four-year residency in Pathology as well as finishing a two-year residency in General Practice, who had friends in Williams and decided he wanted to look the place over. We also came up with a doctor in the Department of Community Medicine at the University of Arizona College of Medicine, who had been a missionary and who had taken a refresher course in Family Practice. He knew Dr. Biswanger in India when they were missionaries together there. With good luck and a lot of effort on the part of the community things were worked out.

The local people were most gracious to the doctors and their families. They anticipated all kinds of personal things that were needed and made these available to them. Dr. Vasquez and his wife have a set of twins — we try to find out these things in advance and come up with

the solutions to the problems — they didn't want the twins to be in the same class at school to compete with each other, so they had to find two first grades. I didn't think we could possibly have two first grades in Williams, but they reassured us they could handle it, and we were able to inform the doctor accordingly. So there will now be three physicians in Williams — Dr. Biswanger, Dr. Morris Powell, who will be finishing at the University the end of August, and Dr. Cesario Vasquez of Michigan, who will be finishing his residency in December.

In Kingman we have Dr. Lingenfelter, who has been using a physician's assistant — one of the few doctors in the state who has done this. The physician's assistant is stationed in Dolan Springs. We also try to recruit physician's assistants and nurse practitioners for the doctors who are of a mind to use them — but we have found little interest so far.

Between Williams and Kingman is Seligman, which has a very active and enthusiastic local community group that has a helicopter pad and I think they are getting a helicopter, but there is no one to fly it. They looked to Yavapai County, of which they are on the border, to sponsor a physician's assistant, but they weren't successful. Dr. Lingenfelter came over from Mohave County and suggested the possibility of working out something such as bringing in a physician's assistant and having a new Internist who had just moved to Kingman supervise him, thereby providing care for Seligman and Ashfork.

We now have so many doctors active in Williams, and Williams is much closer to Seligman than Kingman, that there is potential for forming a network in this direction — again, a multiple-county arrangement. Interestingly, most of the other states that have the same problems as we do — such as Wyoming, Colorado, Montana — have found that often you must have four or five counties plan together for medical care delivery — the problem does not always end at the county line.

There are other areas where things are happening — Holbrook is now trying to form a hospital district to get a broad tax base to support itself — this will include Snowflake, Joseph City and other surrounding towns.

We have a lot of applications from physician's assistants who want to come here and settle — we just cannot find sponsoring M.D.'s. The ac-

ceptance of the P.A.'s hinges on practitioners who have been practicing in the community for some time.

The P.A. concept is so new that physicians do not feel comfortable using physician extenders, but I think that, if we can overcome these hurdles, we can eventually achieve acceptance.

There are some other areas in need — Tubac and Green Valley, for instance, are looking for doctors. We have a prospect who is coming from New Mexico to settle in that area.

Parker says they want a surgeon — we're trying to find help for them.

There is an area in Southwest Phoenix, south of the Salt River, that according to Community Health Planning Council's health indicators, is one of the most underserved areas in the whole city of Phoenix. The people have to come to Maricopa County Hospital or Memorial Hospital, which is really quite a distance for them. It is an area that was annexed by the city and they are looking for a Spanish-speaking doctor.

In Gila Bend there is a possibility for a National Health Service Corps physician.

A newly-formed Navajo National Health Foundation has seceded from the Federal program and is going to operate the Sage Memorial Hospital in Ganado on its own. There is a doctor from Tucson who has an administrator husband — they come as a pair. We hadn't been able to find a job for him, but recently we tried Window Rock, and it's possible we may place them with the Navajo Nation.

We have had three M.D.'s, one D.O. and one P.A. making sixteen site visits throughout the state. We have two or three more prospects who are coming into the area sometime in the latter part of July, and three or four more in August.

We are tapping the resident staff of Maricopa County Hospital — Dr. Sid Fillmore of the Department of Medicine wants me to visit early next year to try to interest the graduates finishing next June in locating in rural communities.

Dr. Tapp at the College of Medicine has contacted me and suggested a program whereby we would take three or four residents from the University of Arizona once a month, over the weekend, fly them to the communities needing physicians, let them visit with the doctors, walk down the streets, talk with the people and the practitioners to see what the towns are all about, with an eye to the future and possibly settling and practicing there.



NATIONAL HEALTH INSURANCE

BLUE SHIELD'S POSITION ON NATIONAL HEALTH POLICY

Presented before the House Ways and
Means Committee, May 31, 1974

Mr. Chairman, my name is Ned F. Parish. I am President of the National Association of Blue Shield Plans. The Association consists of 71 locally-based, not-for-profit, medical care prepayment Plans, employing 55,000 people and covering 72 million private subscribers and an additional 12 million as carriers for government programs. With me are Thomas C. Paton, President of Blue Shield of California; James D. Knebel, Executive Vice President, and William E. Ryan, Senior Vice President of the Association. Mr. Paton heads a Plan which administers government programs for approximately four million beneficiaries. Each of these gentlemen will be available should you have questions.

We have been privileged to appear before you in the past, and we have tried, as objectively as we could, to make available what we have learned about financing health care on a very large scale.

In honesty, Mr. Chairman, we find it increasingly difficult to maintain objectivity in view of the continuing introduction of legislation to destroy our business as we know it. The movement for universal national health insurance in this country is at least 60 years old. It predates the founding of Blue Shield by 30 years. All of the concrete accomplishments of the past 30 years have taken place while a vocal minority called for nationalized health insurance. In the meantime, we have actively been serving the public. With other reputable carriers, we have changed the environment. Nationalized health insurance is a solution for which the problem no longer exists.

We have built in America a private system which extends to the vast majority of the population, and serves most of them quite well. There are exceptions. We have actively urged in the past that these be eliminated. But to judge an industry on its weakest links is certainly to expose the bias of the judges.

The health insurance industry has been subjected to searching examination which we welcome. It has also been subjected, unfortunately, to half truths, distortion, and false premises. We have heard charges, for example, of exorbitant profits. About half of the industry is non-profit. Much of the rest consists of mutual companies which pay dividends only to their policyholders, essentially as premium reductions. For Blue Shield and Blue Cross, the largest carriers, there is no profit. We are told that underwriting profit among the stock insurance companies is less than 1 percent.

Certainly carriers for a small proportion of the population reap exorbitant profits. This situation could easily be controlled by regulation which we have also recommended. To condemn the industry for abuses of this scale is unreasonable and bespeaks a conclusion quite unrelated to the facts.

Private Sector Efficiency

It has been alleged that the government can administer health insurance less expensively and more simply. But no one has ever presented credible evidence to support this allegation. We understand that your Committee has requested such a comparison. We would like very much to see its conclusions.

By Health Insurance Council estimates, 181 million Americans have at least one private health insurance policy. There is no large pool of uninsured employed people. When we gain a group, we take it from another carrier. When we lose one, it has been taken from us. Such decisions are not made capriciously. A thousand employee group may well be spending \$600,000 annually for coverage. Purchasing decisions of that size are made for solid reasons, including cost; the service available to beneficiaries; effectiveness of cost containment programs; the proportion of the bill which is covered; the ability of the carrier to deliver in a wide range of geographic and economic circumstances and the

carrier's ability, or lack of it, to package several lines of coverage within a single premium.

Competitive Environment

This translates to competition. And competition of this kind serves the public better than could a monopoly. There would be no recourse to dissatisfaction with the cost-effectiveness or the benefits of a single program.

We have been accused of lack of comprehensiveness, since many of our basic contracts do not cover office visits. And yet, Mr. Chairman, it costs about \$3.00 to process a claim, regardless of the amount of that claim. For a procedure or episode of care reaching \$300, the administrative cost is one percent, which is highly efficient. For a \$6.00 service, it is 50 percent. Should minor costs aggregate into a real problem, comprehensive major medical policies, held by 74 million Americans in 1973, are an appropriate vehicle. Protection is a necessity. Too much protection is at best an expensive convenience, and at worst an overloading of the system with a major inflationary effect.

It is generally accepted that health care is a right. No organization has done more to make it a right than Blue Shield. In the complexities of modern society, food, clothing, shelter, and even transportation are necessities of life and therefore rights. Only in health is it seriously proposed that the government preempt a major, fiscally stable private industry. If we start down the preemption road, how can logic define a stopping point? And has logic really defined health as a starting point?

Eminent people have stated that a monolithic system of national health insurance could collapse the health care system. And some of them have accepted this with admirable detachment as a necessary price for reorganizing things. Blue Shield deals daily with millions of people with real problems. We do not have the luxury of such detachment. Neither can we compete with the imaginary utopia of a social planner's dream. It is our position that the public does

not support radical restructure of the health delivery and financing systems.

Harris Findings

Evidence of this comes from a December, 1973 Louis Harris poll, commissioned by the Subcommittee on Intergovernmental Relations of the United States Senate. Health care ranked 15th of 16 concerns, with a 3 percent response. But welfare, taxes, and federal spending, crucial issues in the NHI debate, accounted for 36 percent. In other words, the public exhibits 12 times the concern for these factors as it does for the present quality and financing of health care.

Mr. Chairman, we have been constructive in the past and we expect to continue to be. While the Congress considered Health Maintenance Organizations for four years, Blue Cross and Blue Shield were building and testing them. While the Administration labors to implement Professional Standards Review Organizations, we are making available our experience and data know-how from years of utilization review. With Blue Cross, we have spent millions of dollars in the past several years to develop uniform systems capable of handling, with increased efficiency, the substantially larger claims volume that can be expected from a major national priority on improved health coverages. We have spent additional sums on containing health care costs, and on educating the public to care for its own health.

The role of the private carrier in America has been absolutely unique in the world. No other country has developed the strong viable private insurance system that America has created. It is impossible to discuss the problems before us and evaluate solutions without recognizing that fact.

Blue Shield has always acknowledged that these are significant problems that private carriers have not been able to solve. Some of them can never be resolved without the active participation of government. However, we want to em-

phasize the concept of partnership — of working together — as the logical and most productive course. Preemption of the industry would create more problems than it would solve. Simple solutions to complex problems are seldom correct.

Legislative Principles

We believe that legislative action should proceed in accord with a few basic principles. The first of these is that there should be maximum participation by the private sector, which has developed nearly all of the capacity which now exists for the actual administration of health benefits. Excessive regulation and controls not directed at quality and efficiency of coverage should be avoided.

Health insurance is one of the most widely purchased items in our society. Regardless of which statistics one accepts, with consideration of the nearly 24 million actual recipients of Medicaid in 1973, between 87 percent and 97 percent of the American people are eligible for some health care coverage. The case is weak that government must finance a health insurance program for the population at large. The vast majority of Americans have health insurance.

Government Regulations

Government should play a role, however, in assuring that *all* Americans are eligible for health insurance. But the vast regulatory and taxing power of government should be used judiciously. It should be tailored to the real problems. Availability of health insurance for the general, working population is not a real problem. The problem is assuring that coverage is reasonably priced, adequate, and not unduly discriminatory against individuals and small groups, high risks, and the unemployed.

A corollary of this, Mr. Chairman, is that Title I of H.R. 14079 — catastrophic coverage — would be unnecessary if Title III — coverage certification — were implemented to the fullest. The majority of our subscribers presently have

more coverage than contemplated by Title III. It seems both unnecessary and undesirable for government to use its taxation and administrative authority to implement Title I when a simple extension of regulatory authorities under Title III could achieve the same purposes with far less disruption.

H. R. 14079 has inherent potential for drastic change through very simple amendments. The \$2,000 medical expense requirement could be dropped in stages to virtual elimination. The government would then be underwriting essentially all health care coverage. In brief, this proposal, which looks so unlike a comprehensive bill, *can* be viewed almost as the Mills-Kennedy proposal with a higher deductible.

As we have pointed out, the national health strategy should provide for coverage of catastrophic illness. Medical care for the catastrophically ill is not fundamentally different from medical care for any other illness. Catastrophic coverage is essentially a reinstatement of coverage.

Therefore, the most efficient administration of catastrophic coverage is through the same carrier that maintains the history and eligibility files for basic coverage. It would be duplicative and unnecessary expense to establish any entity to pay catastrophic claims separate from the entity that pays basic claims.

Effective regulation of carriers with respect both to benefits and retentions is necessary. Traditionally, this has been a state function, and regulations should continue to be implemented by the states. However, federal guidelines will be needed, and the federal government should have intervention authority if the states fail to act.

Carrier Qualifications

Nearly all Blue Shield Plans are established within one state under special enabling acts. A special problem of carrier qualification is the requirement of H. R. 13870 that a carrier must have written 3 percent of the nation's business. This clause would destroy Blue Shield if enacted as it now stands. Not one Blue Shield Plan could qualify. In some smaller states, this would eliminate the community carrier. Even in some very large states — Massachusetts, Michigan, Pennsylvania — more than half of the population purchases Blue Shield coverage.

Blue Shield Plans collectively cover over 38 percent of the nation's population. If each carrier is required to qualify under this provision,

it would eliminate a non-profit health insurance system which is, with Blue Cross, by far the country's largest health carrier, and a major national asset. The unique nature and wide public acceptance of the Blue Shield Plans require that they be considered collectively as a system. We oppose the 3 percent limitation in any legislation.

Completely aside from this detail of H. R. 13870, we are impressed with the impracticality of making the bill operate. The complexity and scale of its administration dwarf any similar task in the history of this country.

Administrative Changeover

The bill assumes that significant parts of the private sector can be disbanded, yet remain responsible to its subscribers until the date it disappears. It assumes that a new administrative system could go into effect without testing, without phasing, without assurance of effectiveness or operating efficiency, and without retaining a back-up system. It assumes that even those carriers which will survive will be able to maintain their present function, while simultaneously installing new procedures to administer a program for 210 million beneficiaries. It assumes that the recruiting and training of new staff could be carried on concurrently with a full private business workload; and it assumes that an experienced staff can be held together and continue to function in the face of such crisis. Few of these assumptions are certain. H. R. 13870 cannot be implemented without unprecedented administrative chaos.

One criticism leveled at the present health insurance industry is that setting premiums by the experience of "groups" encourages employers to discriminate against older, handicapped and high risk workers. If such potential discrimination is a problem, requiring all groups below a given size to be community rated and limiting differentials in premium could be appropriate.

Mandated Access

A mandated access program should be implemented by requiring all employers to offer both basic and catastrophic coverage (with a minimum level and scope of benefits) to all their employees and to pay at least a percentage of the premium. (This program would, of course, retain collective bargaining.) Participation by the employee would be voluntary. In addition, the basic program with required catastrophic coverage would be offered to the self-

employed at a premium not to exceed a maximum percentage of the group rate.

Another population group with special problems is the temporarily unemployed. This problem can be attacked through the existing unemployment compensation program in each state. Each state has an agency already designed to identify and administer cash benefits to the temporarily unemployed. It seems appropriate to use these functioning agencies to finance a continuation of employment-related health insurance.

The public should have free choice of health care delivery systems. This choice should include: 1) a program utilizing deductibles and coinsurance (or copayments); or 2) first dollar coverage (with or without copayments); or 3) a health maintenance organization. We note that all proposals suggest an HMO option. We respectfully suggest that many might opt between other forms of prepayment as well. If these options are not available, the consumer will lose one of the truly substantive bases of competition.

Federal Financing

Federal financing will be required for coverage of the poor and the medically indigent. The private sector has no capacity to provide such financing without legislation. But health coverage for the general population is not the most effective use of tax revenues, nor necessarily the best approach to health. These revenues can be spent more productively on such other problems as housing, sanitation, diet, and education, which all impact on overall health, and which may be more responsive to federal interest. Unfortunately, the provision of health services alone to people whose problems arise from substandard living conditions may simply recycle the problems.

The national health program should be implemented in phases with respect to specific benefit increments, so as not to place a sudden additional burden on the health system and on those who must pay for benefits. The phasing in should be planned with the ultimate goal of reaching comprehensive health coverage for the entire nation. However, effective and economical systems design requires that the ultimate specifications be spelled out at the time the program is initially legislated.

In summary, Mr. Chairman, we urge the Congress to act realistically to support the quality

and availability of health insurance. We have in this country a strong, viable insurance industry. It is capable of delivering comprehensive benefits to vastly greater numbers. To accomplish its objectives, it needs some assistance from government.

As we have pointed out, the federal government is better qualified to meet the need of the poor and the near poor for access to and availability of needed health care services. And in accomplishing those objectives, the government needs the assistance of the private health insurance industry. As we have indicated, employers will respond to federal legislation requiring them to make comprehensive programs available to their employees. Many employers already have acceptable comprehensive programs. Others, however, have not improved programs during these inflationary years and may be continuing coverages inadequate for today's costs. Minimum standards would be a solution. Certain carriers may be promoting substandard coverages which return little in benefits. Federal guidelines should be enacted to curb these abuses.

Catastrophic Coverage

It has been suggested that the federal government concern itself only with catastrophic illnesses. We believe that such "free standing" catastrophic programs may disadvantage more Americans than they would help by instilling a false sense of security, causing them to drop existing high quality programs. This would expose them to risks they do not now have, and which they may be ill-prepared to meet when they are sick. High quality comprehensive basic coverage can meet a high proportion of the costs of nearly every episode. All that is necessary is to require the basic coverage to carry additional provision for those few episodes of truly catastrophic proportions.

This approach would give the vast majority of Americans adequate health insurance. The exceptions are the poor and the near poor. Private industry is unable to provide them with the same high quality programs without government assistance. We think this is the most urgent need facing this Committee. We assure you of our willingness to participate fully in the administration of proposals for assisting the poor and the near poor.

Thank you, Mr. Chairman, for this opportunity to present our views.



ArMA *Medical History*

HEADLINES OF 1878



AUDREY D. STEVENS

Browsing through early Arizona newspapers makes interesting reading. Consider the following news items:

Arizona Sentinel (Yuma) February 16, 1878. "Small pox got among the Indians on the other side of the river. The poor wretches have suffered terribly for want of food and clothing and presumably some deaths have occurred among them. For obvious reasons we have not investigated the matter closely. The Indian medicine men must have had a rough time of it. Each of them is allowed to have six patients die under his treatment; but when the seventh died, the corpse's friends club the doctor to death. Last week, by permission of Chief Pasqual, a medicine man shot two babies, placing them so that one bullet killed both. They had small pox and were pronounced past the doctor's skill when he was called in. Therefore their deaths do not count on his limit of six. Nice people."

Arizona Sentinel (Yuma March 16, 1878. "From interviews with some captains of the Yumas, we learn that more than half of these Indians have had small pox, 36 of them having died. They declare that the disease has now entirely disappeared from among them. Their custom of burning the bodies and all the personal effects of their dead, has contributed much to prevent continuance of small pox among them. Whole families of them have been sick at the same time, without food, medicine or shelter, and it is only a wonder that any of them lived; nothing saved them but climate."

Arizona Sentinel (Yuma May 4, 1878. "Dr. James H. Taggart." "The Indian Reservation, above La Paz, is now occupied by 1200 to 1500 Indians of the Colorado River. Among them are now transpiring scenes that disgrace humanity. These Indians have maintained a perfect peace

for the past twenty years. Under promise of assistance and instruction they were induced to abandon their homes along the river and concentrate upon the reservation. The promise for a time was partially fulfilled. But, for the past five years, there has been no teacher or school provided for them, and their children are growing up (what are not dying) in ignorance and superstition far denser than in their happier days of freedom. They were induced to abandon their moist planting grounds by promise of a large ditch for irrigating the higher ground of the reservation. Another delusion. For several years they have had given them neither food, tools, seeds, instruction, nor fair opportunity for making a living after their own methods. Since last October neither Agent nor employees have received a dollar of pay from the Government. These poor Indian wretches have until lately subsisted on lizards, roots and seeds produced by the desert around their reservation, going miles for a few handful of grass-seed borne in some favored spot.

"This spring small-pox has scourged them with a virulence only possible among starving, shelterless, medicineless, hopeless wards of the Great United States. While bloody-handed Apaches are getting fat and rich in cattle at San Carlos, these peaceful, humble friends are dying of want and disease on the Colorado. The utter destitution of these poor people cannot be depicted.

"Dr. Taggart went up there to attend the Agent, who has himself been sick at death's door. He found a condition of affairs truly shocking. In one camp near the Agency, out of less than 300 Indians, ninety-four were down in various stages of small-pox, and twenty deaths had occurred up to April 22. He searched the entire camp through for provisions, finding less than ten pounds of everything edible. The same state of affairs was reported from other camps. The

Agent has been authorized to purchase five hundred dollars' worth of flour for subsisting 1500 Indians for the year commencing the first of next July. He has taken the responsibility of buying and now issuing a little flour on his personal credit, in an effort to relieve immediate distress; a mere drop in the bucket.

'Dr. Taggart found less than five dollars' worth of medicines on the reservation and no vaccine virus at all, and no authority nor money for buying any. He came back here, ordered virus to be sent at once from San Francisco, via Ehrenberg, gathered up such medicines as he could get here, and started back to the reservation by steamer last Wednesday. He says that if the government ever pays him for this medicine and attendance, it is all right; if not he will consider it lent to the Lord; but he cannot help doing what he may, to relieve a misery and suffering worse than anything he ever before heard of. He says that there are now upon the reservation not a single surgical instrument fit for use, nor medicine adapted to the most common ailments. But these poor, sick wretches are dying for want of food, more than for want of medicine. Dr. Taggart's statements are more than corroborated by those of others.

"We ask our Delegate to stand up and tell Congress that, on the banks of the Colorado River, there are 1500 human beings, wards of the United States, now being decimated by famine and disease. We call on him to recite the facts above stated and to demand that the same care and protection be given to what may be left of these Indians, as have been afforded to Apaches. Let him demand official investigation of these matters, that its record may so appal Congress, as to prevent their reptition elsewhere. Let him ask that the promises of the Nation to these forlorn Indians be fulfilled at once, and before the last spark of hope is crushed out of

the survivors of such man-abandoned, God-forsaken woe."

Arizona Sentinel (Yuma) June 1, 1878. "Referring to the *Sentinel's* statement, a few weeks ago, of the wretched condition of the Indians on the Colorado River Reservation, Delegate Stevens writes us as follows:

"Washington, May 16, 1878."

"DEAR SIR: The Commissioner of Indian Affairs has ordered three thousand dollars (\$3000) to be expended for the immediate and temporary relief of the Indians on the Colorado River Reservation. This will release me from the arduous duty you put upon me, in your late issue of *The Sentinel*, of standing right up and telling the great American Congress, your story. But I am pleased that it was put in a way to bring immediate relief. . . ."

"We publish the following as of interest in connection with an article in another column (the item above):

House of Representatives,
Washington, May 15, 1878.

"DEAR SIR: Your letter of May 8, reached me duly concerning the Indians of the Colorado River Reservation. I consulted with my colleagues and with the Delegate from Arizona, whom I found had received the same information from another source. I then referred your letter with the enclosure to the Commissioner of Indian Affairs, who promised to render what immediate relief was in his power and if anything further was necessary, to ask the assistance of the Committee of Indian Affairs, of the House.

I am with respect, yours very truly,
Horace Davis."

Arizona Sentinel (Yuma) June 1, 1878. "Our townsman, Dr. Taggart, who has just returned from the Reservation, where he has been for six weeks, found the Indians in a horrible condition.

On the appearance of the small-pox many fled from the Reservation, so that exact statistics cannot be obtained. Dr. Taggart found no clothing, bedding or food among them, save a few pounds of mesquite beans; the dispensary was destitute of medicine applicable to the occasion, and though he had taken up what he could, he was obliged to return for more. On his first arrival he found ninety-four cases, and eight deaths were reported to him; in all there have probably been from 450 to 500 cases and Dr. Taggart knows of 120 deaths, but probably others have died of those who fled, and there may be still others not reported to him, as he found them all very reticent in regard to the disease. They have no dwellings, save excavations in the sand, and the only thing like a building were their sweat-houses, with a dozen bad cases packed in each as close as they could lie, no ventilation and several fires; they were ordered out of these into the fresh air, some refused, most of which died; most of those who obeyed, the greater part recovered.

"The Indians were starving, emaciated, apathetic, expecting and calmly awaiting death. Dr. Taggart vaccinated all he could, not one of which took the disease. Scores of lives might have been saved if the permission lately given to procure and issue flour and beef had been given two months sooner. There have been no new cases for three weeks and the scourge is now under control. Much praise is due to Dr. Taggart for his humanitarian heroism in devoting himself to the care of these poor wretches.

"Not one word of blame can be uttered against the agent, Major J. C. Mallory, who with his brother and Mr. Stokes, have exhausted the means at their disposal, as well as private resources, in alleviating the condition of the Indians; those who fled are now returning to the reservation."



Letters to Editor

August 5, 1974

John R. Green, M.D., Editor-in-Chief
Arizona Medicine
810 W. Bethany Home Road
Phoenix, Arizona 85013

Dear Dr. Green:

I take this opportunity to respond to your editorial on "Destructive Effects of Pot on Mind, Body, and Sex Life," in the July 1974 issue. I am somewhat puzzled to see the closing, "What do you think?" in the absence of a "Letters to the Editor" column in the issue, but since the invitation to respond has been extended, I accept it.

I think the editor is failing to apply his moral indignation with regard to legal prohibitions of harmful substances where it might do the most good. I share his desire to protect individuals from potentially harmful substances. However, I also recognize that since time immemorial, humans have been driven with varying degrees of energy to find substances with which to "get high," a drive which can itself have value to the individual beyond the risk of bodily harm, and a drive which has never had palpable respect for laws of prohibition (cf. Amendments 18, 21 to the U. S. Constitution).

The editor's arguments do not, in my view, justify his conclusion that marijuana should be illegal because it is potentially harmful to the body if abused. Our environment is chock full of substances harmful in their current amounts without regard to our opportunity to abuse them electively. In fact, some of these substances are protected in their current ambient concentrations by law. There are three classes of substance

abuse in our milieu insulting our minds, bodies and sex lives with impunity.

The first, having to do mostly with mind and body, is the epidemic of polypharmacy. Recent data from a Florida metropolitan hospital demonstrates an intolerable percentage of hospital admissions directly resulting from drug reactions or drug-drug interactions. The most serious drug abuse problem in the United States today is not heroin or marijuana, but the misuse and abuse of socially acceptable protected substances, such as Alcohol, Barbiturates, Benzodiazepenes (Librium, Valium, Dalmane), Narcotics (Demorol, Darvon, Percodan), and the reckless, indiscriminate, almost criminal abuse of antibiotics, especially Tetracyclines and Penicillins of all shapes and sizes.

The second offender is atmospheric and environmental contamination with carcinogenic, lung-crippling and poisoning pollutants. For every dollar profit made by a dope-dealer, dispenser of harmful substances that he is, I wonder how many dollars are made by those in the oil, coal, dye, paper, automobile, copper and energy industries. One is not forced to buy dope from a dealer or to buy alcohol from a store or bartender, but one *is* forced to breathe, drink water, and eat foods full of anticholinergics, antibiotics, hormones and insect parts. All this is quite legal, and, in fact, protected by statute stating the "safe" levels of these 20th century additions to the American "nutrition" scene.

The third offender, the most violent and ravaging threat to a comfortable sex life, is not marijuana, but venereal disease. There is an apparent reluctance on our part to realize that a pair of humans preparing to have sex need take only a



ArMA Reports

THE MINUTES APPEARING IN THIS SECTION HAVE BEEN EDITED TO CONSERVE SPACE. A COMPLETE COPY OF THE MINUTES OF ANY MEETING WILL BE MAILED TO ANY MEMBER REQUESTING THEM.

GOVERNMENTAL SERVICES COMMITTEE

Meeting of the Governmental Services Committee of the Arizona Medical Association, Inc. held at 810 West Bethany Home Road, Phoenix, Arizona on Wednesday, June 19, 1974 convened at 6:39 p.m., Stanford F. Farnsworth, M.D., Chairman presiding.

The minutes of meeting held September 29, 1973 were approved as distributed.

MINUTES SECTION ON PART B MEDICARE

Dr. Keary introduced Mr. Tim Beckwith, Assistant Administrator, Phoenix Medicare Claims Administration, Part B Intermediary for Arizona. Mr. Beckwith reported on the limitation on liability of beneficiary and physicians developed by HEW, chiropractic inclusion in Medicare and the General Accounting Office's investigation of laboratory services and billing practices. Mr. Beckwith further informed the Committee that 17 percent of Arizona physicians were accepting assignments and that the profiles were being updated to utilize calendar year 1973 data as of July 1, 1974.

SECTION ON MEDICAID

Dr. Reed summarized the Arizona Medical Assistance Program (Medicaid) enacted during the past legislature and signed by the Governor on May 20, 1974. The effective date is October 1, 1975; however, funds for planning will be available to the Arizona Department of Health Services on August 9, 1974.

Dr. Schamadan reported that the legislature appropriated \$340,000 to the Department of Health Services for matching funds for federal grants and for planning purposes to implement the Medicaid program. State funds will be available to the Department on August 9. It is anticipated that approximately \$300,000 will be available for seed programs or pilot projects to consider utilization of foundations for medical care, physician assistance and nurse practitioners and to discover better transportation, etc.

Considerable discussion ensued on how the Arizona Medical Association could best assist the Department of Health Services in making a success of the Statewide Medical Assistance Program. Dr. Schamadan requested

minute to protect their bodies from VD, by inspecting and cleaning their genitals to discover signs of illness, by the use of a condom and foam, and the use of urination after sex to help clear the urethra from microbial colonization before actual tissue invasion has begun. Some of us educate our patients on the harms of drugs, but we fail to establish an atmosphere of trust that would bring VD into the open for eradication and prevention. Unfortunately, VD, too is shrouded by moral illegality, but is not a criminal offense.

In summary, I say that the horrors of marijuana are less than those of many other threats to mind, body and sex life in our culture, most of which *are legal*. I propose that jailing marijuana offenders is a threat to mind, body and sex life orders of magnitude greater than the pharmacological threat, and I challenge anyone in disagreement with this to spend one week in any county, state or federal jail or prison in Arizona to see the reality of that threat for yourself. I maintain that we have a choice of using or not using derivatives of *Cannabis Sativa*, but *none* is being exposed to far more dangerous but legal poisons. I feel that fairness demands the repeal of laws that criminalize marijuana for personal use, and fairness also demands action from each segment of the community, including the medical community, to begin to curb every assault, upon the minds, bodies and sex lives of our patients and ourselves, including those protected by law currently.

Sincerely,
Alexander Kelter, M.D.
Member, ArMA

the Association to take the lead in developing a liaison or advisory committee to the Department of Health Services for the Medicaid program with special emphasis on professional services.

It was moved and carried that the section on Medicaid be the Association's official liaison committee with the Arizona Department of Health Services, that the committee include appropriate specialty representation and further representation of the Arizona Osteopathic Association, Arizona Dental Association, Arizona Optometric Association and Arizona Podiatry Association, to be invited by Dr. Schamadan.

It is anticipated that the Section on Medicaid will have its first meeting with the Department of Health Services approximately August 1, 1974.

SECTION ON MENTAL HEALTH

Dr. Bendheim reported on the enactment of SB 1035, Mental Evaluation, Treatment and Commitment, signed by the Governor on May 20, 1974. This legislation prevents unnecessary hospitalization of mental patients and provides for continuing evaluation of the patient. Generally the legislation was necessary and well written; however, there are some major defects, i.e. it omits commitment for those considered to be dangerous to property. The Arizona Psychiatric Society will be proposing amendments to the new law during the next legislative session to alleviate the defects and Dr. Bendheim will keep the Committee informed as the appropriate amendments are developed.

SECTION ON O.E.O. PROGRAMS SECTION ON INDIGENT CARE

It was determined to dissolve the Sections on O.E.O. Programs and Indigent Care subject to recall by the Chairman. It would appear that the Section on Medicaid would be the only Section necessary for indigent care at this time.

SECTION ON REGIONAL MEDICAL PROGRAMS

Dr. Melick called Mr. Barnett and apologized for not being able to attending the meeting. The following report was given for Dr. Melick via Mr. Barnett.

Funding for RMP Activities

The National Advisory Council during meeting held June 15, 1974 discovered some problems with bylaws not being in conformance and, therefore, have delayed report on funding for the next fiscal year until June 25, 1974. Dr. Melick does not anticipate any problem however.

C.E.S.A.

Dr. Melick reported that the C.E.S.A. program will be taken over by the University of Arizona, Office of Vice President of Health Services on July 1, 1974. Dr. DuVal has appointed David Wayne Smith, Ph.D., as Program Manager of C.E.S.A. activities. The College of Medicine, College of Nursing and College of Pharmacy will appoint an Assistant Dean for continuing education to work with Dr. Smith. It is also anticipated that there will be an Assistant Dean for allied health. Further, a committee on continuing medical education from the College of Medicine will be appointed and a state advisory committee with appointments from the Professional Association will be announced in the near future.

SECTION ON ARIZONA PLAN FOR HEALTH SERVICES

Dr. Farnsworth reported that the Department of Health Services has received a mandate from the legislature to submit the initial Plan for Health Services by January 30, 1975 and that it was appropriate to maintain a Section on Arizona Plan for Health Services. Dr. Schamadan informed the Committee that the reports developed by the Arizona Health Planning Authority were being reviewed and assistance from the Committee would be welcome.

It was determined that Walter R. Eicher, M.D., would be the Chairman of this Section on Arizona Plan for Health Services and that the membership include appropriate members of the Task Force to the Department of Health Services. Current membership includes the following:

Walter R. Eicher, M.D.; Stanford F. Farnsworth, M.D.; Richard O'Flynn, M.D.; Mitchell Kasovac, D.O.; Patrick P. Moraca, M.D.; Arthur D. Nelson, M.D.; Florian R. Rabe, M.D.; Donald F. Schaller, M.D.

Meeting adjourned at 9:06 p.m.

William E. Crisp, M.D.
Secretary

BOARD OF DIRECTORS

The meeting of the Board of Directors of the Arizona Medical Association, Inc., held at 810 West Bethany Home Road, Phoenix, Arizona, on Saturday, June 15, 1974, a quorum being present, convened at 1:07 p.m., William G. Payne, M.D., President and Chairman, presiding.

WELCOME

Dr. Payne extended welcome to the County Medical Society presidents, various other guests and Mr. Raul Castro, candidate for governor.

MINUTES

The minutes of meetings held April 23, 1974 and April 27, 1974 were approved as distributed.

MEMBERSHIP GROWTH

Dr. Payne read the following telegram received from Russell B. Roth, M.D., President of the American Medical Association:

"It is always a pleasure to be the official bearer of good tidings. It is my cheerful privilege to inform you that the Arizona Medical Association, Inc. has once again achieved the distinction of exceeding its previous year's AMA dues paying membership. I am sure that this notification does not surprise either you or your staff since Arizona is one of only four states in the Union which has reached this pinnacle the last 11 consecutive years. Congratulations to you, other Arizona Medical Association officers and trustees on your fine staff for exhibiting the leadership that is perpetuating a unified profession in Arizona."

STATE GOVERNMENT AND THE MEDICAL PROFESSION

Mr. Raul Castro, candidate for governor, spoke briefly on health problems in Arizona, as he sees them. He then submitted himself to questions from the Board. Mr. Castro said that his door is open and will remain open to members of the profession should he be successful in his efforts to become governor of Arizona.

DEPARTMENT OF HEALTH SERVICES

James L. Schamadan, M.D., Director of the Department of Health Services, reported that things are beginning to move toward implementing the Medicaid Program in Arizona and that his department is working closely with Dr. Reed's section on Title XIX of the Governmental Services Committee.

Dr. Schamadan also reported that the conflict between the Crippled Children's Hospital and Boyd R. Burkhardt, M.D. and Paul L. Schnur, M.D. is moving toward negotiated settlement with eight of the nine points being agreed to by both sides. He indicated that he felt the matter will probably be settled out of court.

ARIZONA MEDICAL POLITICAL ACTION COMMITTEE REPORT

Confirmation of Appointment

It was moved and carried to confirm Don V. Langston, M.D. as the chairman for ArMPAC for the coming year.

Report of Activities

Dr. Langston reported that membership is continually growing. He urged all Board members to become sustaining members. He reported that the ArMPAC Board had recently voted to not become involved in primary races.

BOARD OF DIRECTORS

Request to be Amicus Curiae in the Musick, et al vs. Board of Regents Case

Mr. Jacobson reviewed the background of the request, and following considerable discussion the following action was taken.

It was moved and carried that this association not become amicus curiae in the Musick, et al vs. Board of Regents case.

Advisory Committee to the Director of the Department of Health Services

The Board received for information the announcement of the appointment of the subject committee. It was pointed out that C. Herbert Fredell, M.D. of Flagstaff represents the Association on this committee.

USP Committee on Revision

It was recommended that Rubin Bressler, M.D. and John D. Palmer, M.D., both of Tucson, be contacted to see if they would be willing to have their names submitted as possible nominees to the subject committee.

BOMEX Appointment Nominations

It was noted that the following names have been submitted to the Governor as candidates for appointment to BOMEX:

Richard T. McDonald, M.D.
John E. Hildebrand, M.D.
Gerald F. McNally, M.D.
Albert I. Rosenblatt, M.D.

Because of a provision requiring five years of active practice in Arizona before appointment, Drs. McNally and Rosenblatt's names were withdrawn.

ARMP-CESA Request

The request for financial participation as "in-kind" (providing office space) assistance for this organization was reviewed. The value of the CESA educational activities was pointed out. It was also noted that the College of Medicine may also be preparing to enter into continuing medical education activities. Following considerable discussion the following two motions were made:

It was moved and carried to take no action on this request at this time, but the matter is to be referred to the Medical Education Committee for review and report back to the Board of Directors after they have had an opportunity to discuss the matter with the Dean of the College of Medicine.

It was moved and carried that this association offer "in-kind" support to the CESA program in the form of space for two desks for a period not to exceed three months.

Arizona Health Speakers Information Services

The request for office space by the subject organization was reviewed along with MacDonald Wood, M.D.'s letter of June 5, 1974.

It was moved and carried to not allocate office space to this organization.

Charley H. Finney, M.D. Resignation

It was moved and carried to accept Dr. Finney's resignation with regret and to direct a letter to the Maricopa County Medical Society for suggestions for replacement.

Travelers Insurance Companies Loss Control Program

It was moved and carried to confirm the mail vote taken May 10, 1974 authorizing participation in a service contract with the Travelers to do case review and underwriting review. Such activities to be delegated to the Executive Committee until further notice. The Executive Committee to report the extent of the activities to the Board of Directors at each succeeding meeting. The board further authorizes the Executive Committee to expend funds realized from the service contract to carry out this loss control program.

HOUSE OF DELEGATES RESOLUTIONS STATUS REPORT

Resolution 1-74 — Anesthesia Practices

Mr. Robinson reported that the president of the Arizona Society of Anesthesiologists is in the process of preparing a recommendation for the next Board of Directors meeting.

Resolution 6-74 — Revised

This resolution dealing with the Occupational Health Committee and Medical Economics Committee has been referred to the Bylaws Committee which has not met.

Resolution 7-74 — Patient Compensation Insurance

It was moved and carried to confirm Richard T. McDonald, M.D., as Chairman of an ad hoc committee on Patient Compensation Insurance.

It was suggested that the following members be asked to serve on the Ad Hoc Committee:

Walter E. Edwards, M.D.
Paul B. Jarrett, M.D.
James F. Martin, M.D.
Richard W. Abbuhl, M.D.

Resolution 8-74 — Uniform Health Insurance Claim Form

Referred to the Medical Economics Committee for action. Committee has not met.

Resolution 9-74 — PSRO

It was moved and carried to take no action on this resolution until after the meeting of the American Medical Association. Following that, the President is to appoint an ad hoc committee to develop a plan for implementation.

Resolution 10-74 — Mandatory Full Disclosure by Insurance Companies

Referred to Medical Economics Committee which has not met.

Resolution 12-74 — Federal Register Regulations

AMA Delegates advised of action. Addition information being sought from Pima County Medical Society.

Substitute Resolution 13-74 — FDA

Congressional delegation has been advised of our actions.

Substitute Resolution 14-74 — Statewide Medical Assistance Program

Enacted into law May 20, 1974.

**EXECUTIVE COMMITTEE
Membership Classification Changes
Approved**

1. Maricopa County

- a) John R. Sebald, M.D. — Deceased — Request for 1974 dues refund by family.
- b) Henry J. J. Steffens, Jr., M.D. — Active to Associate — Account illness — Dues exempt — Effective 1/1/74.
- c) Leslie Kober, M.D. — Active to Active over 70 — Account age — Dues exempt — Effective 1/1/74.

- d) William F. Schroeder III, M.D. — Active to Associate — Account retirement — Dues exempt — Effective 1/1/74.

2. Pima County

- a) W. Stanley Kitt, M.D. — Active to Active over 70 — Account age — Dues exempt — Effective 1/1/74.
- b) Elmer S. Yeoman, M.D. — Active to Affiliate — Out of state — Dues exempt — Effective 1/1/74.

**AD HOC INTERN AND RESIDENT
MEMBERSHIP COMMITTEE**

It was moved and carried to ask the following gentlemen to serve as the subject committee:

James H. Evers, M.D. — Chairman
Peter Rinaldi, M.D.
Roy Major, M.D.

FINANCE COMMITTEE

Richard L. Dexter, M.D., Treasurer, reviewed the financial statement for the five-month period ending May 31, 1974 — RECEIVED.

LEGISLATIVE COMMITTEE

Dr. Flynn and Mr. Barnett reviewed the final status reports on the work done during the last legislative sessions as follows:

ArMA Action	Bill No.	Prime Sponsor
Active Support	HB 2098	Appropriations Committee
Active Support	HB 2185	Health & Welfare Committee
Active Support	HB 2186	Health & Welfare Committee
Active Support	HB 2041	McCarthy
Active Support	HB 2067	Health & Welfare Committee
Active Support	HB 2189	Health & Welfare Committee
Active Support	SB 1165	Alexander and Adams
General Support	SB 1035	Alexander
General Support	HB 2002	Adams
General Support	HB 2068	Health & Welfare Committee
Conditional Sup.	SB 1204	Corbet
	SB 1269	Health & Welfare Committee
	SB 1129	Health & Welfare Committee
	SB 1213	Health & Welfare Committee
	SB 1307	Health & Welfare Committee
Active Support	HB 2088	Health & Welfare Committee
Active Nonsupport		Holsclaw
Active Nonsupport	HB 2069	Health & Welfare Committee
Active Nonsupport	HB 2005	Commerce & Industry Com.
Active Nonsupport	SB 1271	Holsclaw
Active Nonsupport	HB 2084	Health & Welfare Committee

Title and Status
Appropriation for Premature Transport Enacted — Chapter 31
Mandatory Newborn Insurance Enacted — Chapter 173
Patient-Doctor Privileged Communications Enacted — Chapter 93
Anatomical Gift — Drivers License Enacted — Chapter 79
Medical Licensure Exemption Enacted — Chapter 61
Health Facilities Authority Enacted — Chapter 128
Medical Assistance and Catastrophic Insurance Enacted — Chapter 187
Mental Evaluation, Treatment, Commitment and Parental Consent for Surgery of Minors Enacted — Chapter 185
Mobile Emergency Paramedics Sent to Governor — Vetoed
Clinical Lab-Self Support Enacted — Chapter 30
Physical Therapist Licensing Enacted — Chapter 75
Nurse Funds and Extended Role Enacted — Chapter 204
Dentist Enacted — Chapter 74
Smoking Prohibitions Enacted — Chapter 77
Local Health Care Institutions Enacted — Chapter 188
State Laboratory Revolving Fund Failed in House
Heredity Disorders Board Not introduced
Psychologist Insurance Benefits Passed House. Failed in Senate Agriculture, Commerce and Labor Committee
Department of Commerce Never heard by prime committees
Required PKU Testing Held by Senate H&W Committee
Health Care Institutions Cost Review Never heard

Active Nonsupport	HB 2246	Barr
Active Nonsupport	HB 2309	Kincaid
Active Nonsupport	HB 2321	Kincaid
General Support	SB 1030 HB 2326	Runyan, Felix, Lena Barr, Adams, McConnell
Support Principal	SB 1164	Health & Welfare Committee
General Support	SB 2191	Health & Welfare Committee
For Info Only	SB 1308	Gutierrez
General Support	SB 1198	Baldwin
General Support	HB 2010	Health & Welfare Committee
Nonsupport	HB 2184	Health & Welfare Committee
For Info Only	HCM 2002 SCM 1001	Skelly Gabaldon
Nonsupport	SB 1113	Roeder
Nonsupport	SB 1155	McNulty
Nonsupport	SB 1167	Gutierrez
General Support	SB 1209	Osborn
For Info Only	HB 2089	Health & Welfare Committee
General Support	HB 2110	Health & Welfare Committee
Conditional Sup.	HB 2168	King
For Info Only	HB 2190	McCarthy
Support Concept	HB 2252	Health & Welfare Committee
General Support	HB 2253	Health & Welfare Committee
For Info Only	HB 2275	Kincaid
General Support	SB 1020	Health & Welfare Committee
General Support	HB 2191	Health & Welfare Committee
General Support	SB 1022	Health & Welfare Committee

PIMA COUNTY HEALTH DEPARTMENT LETTER MAY 20, 1974

The subject letter requesting our support of a law requiring all alcoholic beverages be labeled "Warning, The Contents Of This Container Can Be Dangerous To Health" was referred to the Legislative Committee.

PUBLIC RELATIONS COMMITTEE

It was moved and carried to confirm William C. Scott, M.D. as Chairman of the Subject Committee.

SCIENTIFIC ASSEMBLY COMMITTEE

1977 Meeting Location

It was moved and carried to adopt the practice of alternating the annual meetings between the Tucson and Phoenix areas should the 1975 meeting in Tucson be satisfactory.

Format

It was moved and carried that there be no change in the present format of the annual meetings, and that the House of Delegates continue to meet on Tuesday after-

M.D. Full Reciprocity

Never heard

Chiropractice Practice Act

Never heard

Provide Insurance for Chiropractic Services

Never heard

Medical Scholarships, Loans

Failed

Controlled Substance Act

Held by Senate H&W Committee

Health Facilities License Exemption

Never heard

Alcohol and Drug Detoxification

Held in Senate Rules

Lead Based Paints

Held in Senate Rules

Medical Advisory Board — Driving Licensing

Passed H&W Committee. Held in Transportation.

Health Services Manpower Council

Never heard

Rights; Unborn Child

Held by Senate Caucus

Torturous Human Experiment and Therapy Prohibited

Held by sponsor for further study

Physician Public Service

Held by H&W Committee

Labor-Employee Medical Care

Held by Agriculture, Commerce and Labor

Minor Consent — Health Care from 18 to 14 years

Held in Senate Caucus

County Medical Examiners

Held by House H&W Committee

Immunizations — Responsibility from Schools to

Health Department Held by Education Committee

Abortion

Failed as tacked onto SB 1020

Office for Children

Held in Committee

Hypodermic Needle Restriction

Held in Committee

Catastrophic Medical Cost Insurance Program

Tacked onto SB 1165

Abortions — Reporting Number Performed

Never heard

Cease and Desist Orders — Abortion

Held after conference agreement

Health Care Licensing

Held in House

DHS — Conforming Changes

Held in Senate due to M.R. amendments

noon and again on Saturday morning.

Exhibit Policy

It was moved and carried that exhibits at future annual meetings be limited to commercial or scientific exhibits only.

AMA DELEGATE REPORT

Dr. Cloud reported that he had decided to run for the Board of Trustees of the American Medical Association and that an active campaign was currently underway.

He also reported that there were a number of hot issues coming before the AMA at the June 22-27 meeting including PSRO, method of electing members of the Board of Trustees, and many other less volatile issues.

The Board expresses its good wishes and luck to Dr. Cloud and his campaign.

CORRESPONDENCE

Pima County Medical Society's Letter of April 25, 1974 Re: Chiropractic

Received for information.

American Cancer Society, Arizona Division Letter of May 23, 1974

The subject letter recommending the establishment of a cancer center was referred to the Professional Committee.

OTHER BUSINESS Solicitation for Office

It was moved and carried to recommend to the Articles of Incorporation and Bylaws Committee that a resolution be prepared that would delete "Section VI Solicitation" of Chapter V from the bylaws.

Meeting adjourned 4:42 p.m.

William E. Crisp, M.D.
Secretary

EXECUTIVE COMMITTEE

The meeting of the Executive Committee of the Arizona Medical Association, Inc. held at 810 West Bethany Home Road, Phoenix, Arizona, on Saturday, July 20, 1974, a quorum being present, convened at 2:03 p.m., William G. Payne, M.D., President and Chairman, presiding.

MINUTES

The minutes of the meeting held June 15, 1974, were approved as distributed.

AMA BOARD OF TRUSTEES

It was moved and carried to ask the Articles of Incorporation and Bylaws Committee to prepare the proper amendment to the Bylaws so that any member of this Association who is elected to the Board of Trustees of the American Medical Association will automatically be a voting member of the Board of Directors of the Arizona Medical Association. His term to coincide with that of his term on the Board of Trustees of the American Medical Association.

DEPARTMENT OF HEALTH SERVICES

Dr. Schamadan expressed his appreciation for Arizona Medicine making available a page each month for matters dealing with his department.

He reviewed current activities relating to a variety of programs ongoing in his department, such as: Crippled Children's Hospital; the State hospital and the new commitment laws; paramedics; and other topics of interest.

Emergency Medicine

Considerable discussion ensued on the broad subject of Emergency Medicine. Consideration was given to the qualifications of physicians, physician's assistants, paramedics, nurses and others working in the field.

It was recommended that Dr. Schaller, Chairman of the Section on Emergency Care of the Professional Committee, be asked to revitalize his section, including representatives of the Arizona Hospital Association, the Arizona Nurses Association, Arizona Chapter of the American College of Emergency Room Physicians, and the American College of Surgeons Committee on Trauma, Arizona Chapter.

The Section could provide the official medical advisory board for paramedic qualifying examinations as well as general help input to the Department.

The Section would also review the total qualifications of personnel in emergency rooms, resulting in rec-

ommendations for improving care in this area of medicine.

The Section would draw on existing work, setting forth qualifications developed by other organizations for the various categories of personnel.

ASSOCIATE DEAN FOR CONTINUING MEDICAL EDUCATION

Mr. Robinson reported that Dr. Vanselow is in the process of preliminary interviews to fill the subject position. After the field of candidates is narrowed down, the Dean has asked that several of the officers participate in the final interview. RECEIVED.

BOMEX APPOINTMENTS

Mr. Robinson reported that the Governor has asked for additional names for possible appointment to the Board of Medical Examiners. The following names were recommended:

Bruce N. Curtis, M.D., Safford

Manus R. Spanier, M.D., Prescott

Each candidate to be contacted before the names are submitted.

ABC-HMO ADVERTISING

The complaint regarding advertising by the ABC-HMO filed by Alice E. Palmer, M.D., and Paul W. Becker, M.D., was discussed at length.

It was noted that the doctors have been advised of the proper procedure to follow in matters of this type. NO ACTION TAKEN.

P.S.R.O. — COMMITTEE APPOINTMENT

Following the direction of the Board of Directors, the following committee was suggested whose charge would be to develop a plan for implementing Resolution 9-74. Such plan to include cost estimates.

James M. Hurley, M.D., Chairman

Richard S. Armstrong, M.D.

Clifford J. Hoffman, M.D.

Patrick P. Monaca, M.D.

David Pent, M.D.

Newell K. Richardson, M.D.

Dr. Hurley is to be asked for additional suggestions.

UNDERWRITING REVIEW

The committee determined that the first case submitted to it should be reviewed by appropriate specialists in the field and returned to the committee at its next meeting.

OTHER BUSINESS

Health Manpower Committee/Subcommittee on Rural Health of the Section on Public Health of the Professional Committee conflict

Following extensive discussion regarding the overlapping of activities of the subject committee and subcommittee.

It was moved and carried to advise the Chairman of the Professional Committee of the conflict of activities and ask him to direct the Subcommittee away from activities of the Health Manpower Committee.

AMA Regional Scientific Assembly Meeting

James L. Breeling's letter of 7/9/74 asking for co-sponsorship of an AMA Scientific Assembly regional meeting in Phoenix in March, 1975 was reviewed.

It was moved and carried to extend the requested invitation.

Central District Director

The Committee was reminded that Maricopa County Medical Society was asked to submit the name of a person to replace Charles H. Finney, M.D., for the balance of his term (1973-76). Maricopa County Medical Society has recommended David James, M.D.

It was determined to invite Dr. James to the 9/21/74 meeting of the Board of Directors and place his appointment as the first item of business so that he can participate fully at that meeting.

Meeting adjourned 4:46 p.m.

William E. Crisp, M.D.,
Secretary
Bruce E. Robinson
Executive Director

HEALTH MANPOWER COMMITTEE

The meeting of the Health Manpower Committee of the Arizona Medical Association, Inc., held July 17, 1974, at 810 W. Bethany Home Road, Phoenix, Arizona, convened at 6:51 p.m., Louis C. Kossuth, M.D., Chairman, presiding.

MINUTES

The minutes of the meeting held September 22, 1973, were approved as distributed.

AIR TRANSPORT

Mr. Frank Anders, medical student from Louisiana, reported on a proposed plan to provide medical care in underserved areas of the state utilizing third or fourth year residents from the "primary care" residency programs in Phoenix and Tucson. "Primary Care" residents were defined as those in the fields of Family Practice, Internal Medicine, Pediatrics and OB/GYN.

Mr. Anders stated that the necessary airplanes can be obtained free, utilizing old Navy C45 Model D planes that can be obtained from the Navy through the state's surplus property division. From ten to twelve thousand dollars is needed to update and convert the plane for passenger and stretcher use, depending on the needs of the program. He showed slides of a plane that had been converted to accommodate four passengers plus two stretchers. He stated that operational costs of this aircraft ran at \$65.00 per hour.

The program would call for a resident to be flown to an underserved community perhaps once a week, utilizing whatever facilities that are available at the local airport for the examining room. The resident could see from 30 to 40 patients a day. It was pointed out that it would be possible to substantially offset the costs of the program from the fees charged for the services rendered.

Mr. Anders indicated that his discussions with residents brought very favorable response to the suggested program.

It was pointed out that one of the problems would be getting concurrence from the heads of the various residency programs.

The Committee determined that there is adequate interest in the subject to research the matter further. The Chairman appointed the following men as a Sub-

committee to explore the matter and report back at the next meeting.

Herbert K. Abrams, M.D.
John B. Miller, M.D.
Manus R. Spanier, M.D.

HEALTH MANPOWER PROGRAM

Mr. Ted McFarlan, Program Manager, Arizona Regional Medical Programs, reported on this new program designed to help the physician distribution problem in Arizona as follows:

"This program started on the day after New Year's, 1974, when we formed our work group, which consisted of Bruce E. Robinson, Executive Director, ArMA, Paul Boykin, from the Board of Medical Examiners, Bill Ivey and Dr. Eleanor Jacqua from Regional Medical Programs, myself, and a very remarkable gentleman by the name of Frank Mangin, who worked with the Economic Development Program of the Valley National Bank. Mr. Mangin had written his Master's thesis on the State of Arizona — I believe at that time he was at the University of Oklahoma. He had traveled extensively throughout Arizona, and had studied the power structure of all the small communities in the state. He had amazing resources upon which to draw to help us in setting priorities.

At that time some of the communities that we felt needed help were Springerville-St. Johns, Snowflake, Coolidge-Florence, Globe, Bagdad (having difficulty at that time), Winslow, Eloy, Bullhead City, Holbrook, Gilbert, Yuma-Somerton, Parker, Safford and Superior.

These priorities have shifted some since then. There are always dynamic forces which affect planning — but as we started out these were the ones we felt deserved our first attention. These aren't all places without doctors, they include areas that we considered underserved — perhaps needing more doctors, although some had none at all. They were sort of brainstormed, and were established on the basis of the knowledge of the people on the work group. As the program developed, contacts were made with the local people and physicians already practicing in the areas.

The first place we contacted was St. John's, which was felt to have the worst problem. We had a request from Representative Jack Brown, a native of St. John's, who felt that they really needed immediate attention. Dr. Melick and I traveled to St. John's and met with the town council. They had the idea in their minds that they should have a doctor, and that their population was such that they could support one. However, it appeared to us that the size of the town just didn't justify a doctor. In talking to the hospital board at nearby Springerville, we found that Dr. Erhart had already made connections, and had recruited one physician and was promised a third and fourth who would be very willing to go into St. John's on a rotating basis — a three times a week circuit-riding system — to provide care to the people there.

To digress a moment, let me explain something about our operation. There are three of us in the Arizona Regional Medical Program working on this project. The state is roughly divided into three regions. I am serving the northern counties. Mrs. Phyllis Reifurth, who is stationed in Tucson, has the southern counties, and Mr.

Seth Linthicum is working in Mohave and Yuma counties. Our program includes site development and site improvement, and also arranging transportation of patients to sources of medical care — or bringing medical care to patients.

In line with the above, we looked at the old hospital in St. John's, and found that it would lend itself quite well to a clinical facility. So rather than look for a doctor for that area, we concentrated on updating the site, with Dr. Erhart and his associates providing the care.

It was most interesting to see the situation resolve itself. Evidently these possibilities had never been discussed before, and the people at St. John's had had the feeling that they wanted their own doctor and that this would be the only answer. Dr. Erhart was quite surprised to find out that they would be willing to have him serve them, even if on a part-time basis. This kind of network relationship begins to develop when you get the doctors and community working toward a common goal.

All of these communities come up with their own sets of options so far as practice opportunities are concerned. We work strictly with community groups, which vary in size from a dozen down to five or six. Where there is a doctor in the community, he is always involved. We try to get comprehensive health planning people involved, and we get people from the school boards, anybody who can have input and is able to act as a reception committee, who can host the doctor and his family if we can bring them to the community. The source that we have for candidates comes from the files of the Arizona Medical Association. We look at those who want to come to the state, I contact them with an offer to pay their expenses to get them to the community for a visit. The community group is organized and the doctor is turned over to them to do the selling job on him.

We had come very close to finding another doctor for Holbrook, but I understand there has been a recent development internes of the Samaritan Health Service underwriting the Holbrook Hospital, which has now changed. They were offering a doctor the possibility of construction of a new four-doctor clinical unit, a guaranteed minimum, and a number of other emoluments that made it very attractive. That has changed — and the offer we now have is to go into practice with another doctor in the community.

Williams was another area that asked us for help. They had a hospital that was closed down, and which fell far short of accreditation. The Lutheran denomination has given them an infusion of money and has appointed a staff and a professional administrator and they are starting to do all kinds of renovation which will bring it up to accreditation standards. There is Dr. Lorraine Biswanger, a Harvard-trained, Boarded surgeon, who came to Williams and started doing general practice. She wasn't intending to do that, as she had thought she would be doing general surgery, but she found she was the only doctor. The community paid doctors to come up for the weekends and spell her off so she wouldn't collapse. At about this time we had a doctor who had done a stint of military duty and who is

finishing a four-year residency in Pathology as well as finishing a two-year residency in General Practice, who had friends in Williams and decided he wanted to look the place over. We also came up with a doctor in the Department of Community Medicine at the University of Arizona College of Medicine, who had been a missionary and who had taken a refresher course in Family Practice. He knew Dr. Biswanger in India when they were missionaries together there. With good luck and a lot of effort on the part of the community things were worked out.

The local people were most gracious to the doctors and their families. They anticipated all kinds of personal things that were needed and made these available to them. Dr. Powell and his wife had a set of twins — we try to find out these things in advance and come up with the solutions to the problems — they didn't want the twins to be in the same class at school to compete with each other, so they had to find two first grades. I didn't think we could possibly have two first grades in Williams, but they reassured us they could handle it, and we were able to inform the doctor accordingly. So there will now be three physicians in Williams — Dr. Biswanger, Dr. Morris Powell, who will be finishing at the University the end of August, and Dr. Cesario Vasquez of Michigan, who will be finishing his residency in December.

In Kingman we have Dr. Lingenfelter, who has been using a physician's assistant — one of the few doctors in the state who has done this. The physician's assistant is stationed in Dolan Springs. We also try to recruit physician's assistants and nurse practitioners for the doctors who are of a mind to use them — but we have found little interest so far.

Between Williams and Kingman is Seligman, which has a very active and enthusiastic local community group that has a helicopter pad and I think they are getting a helicopter, but there is no one to fly it. They looked to Yavapai County, of which they are on the border, to sponsor a physician's assistant, but they weren't successful. Dr. Lingenfelter came over from Mohave County and suggested the possibility of working out something such as bringing in a physician's assistant and having a new Internist who had just moved to Kingman supervise him, thereby providing care for Seligman and Ashfork.

We now have so many doctors active in Williams, and Williams is much closer to Seligman than Kingman, that there is potential for forming a network in this direction — again, a multiple-county arrangement. Interestingly, most of the other states that have the same problems as we do — such as Wyoming, Colorado, Montana — have found that often you must have four or five counties plan together for medical care delivery — the problem does not always end at the county line.

There are other areas where things are happening — Holbrook is now trying to form a hospital district to get a broad tax base to support itself — this will include Snowflake, Joseph City and other surrounding towns.

We have a lot of applications from physician's assistants who want to come here and settle — we just cannot find sponsoring M.D.'s. The acceptance of the P.A.'s hinges on practitioners who have been practicing

in the community for some time. The P.A. concept is so new that physicians do not feel comfortable using physician extenders, but I think that, if we can overcome these hurdles, we can eventually achieve acceptance.

There are some other areas in need — Tubac and Green Valley, for instance, are looking for doctors. We have a prospect who is coming from New Mexico to settle in that area.

Parker says they want a surgeon — we're trying to find help for them.

There is an area in Southwest Phoenix, south of the Salt River, that according to Community Health Planning Council's health indicators, is one of the most underserved areas in the whole city of Phoenix. The people have to come to Maricopa County Hospital or Memorial Hospital, which is really quite a distance for them. It is an area that was annexed by the city and they are looking for a Spanish-speaking doctor.

In Gila Bend there is a possibility for a National Health Service Corps physician.

A newly-formed Navajo National Health Foundation has seceded from the Federal program and is going to operate the Sage Memorial Hospital in Ganado on its own. There is a doctor from Tucson who has an administrator husband — they come as a pair. We hadn't been able to find a job for him, but recently we tried Window Rock, and it's possible we may place them with the Navajo Nation.

We have had three M.D.'s, one D.O. and one P.A. making sixteen site visits throughout the state. We have two or three more prospects who are coming into the area sometime in the latter part of July, and three or four more in August.

We are tapping the resident staff of Maricopa County Hospital — Dr. Sid Fillmore of the Department of Medicine wants me to visit early next year to try to interest the graduates finishing next June in locating in rural communities.

Dr. Tapp at the College of Medicine has contacted me and suggested a program whereby we would take three or four residents from the University of Arizona once a month, over the weekend, fly them to the communities needing physicians, let them visit with the doctors, walk down the streets, talk with the people and the practitioners to see what the towns are all about, with an eye to the future and possibly settling and practicing there." — REPORT RECEIVED.

NATIONAL HEALTH SERVICE CORPS

Ms. D. J. Soviera, newly appointed coordinator for the subject program for Region IX of HED reported on current National Health Service Corps programs.

She stated that at present there are three in Arizona

— one in Marana and two in South Phoenix. She indicated that recent legislative changes have made it possible to offer a \$32,000.00 annual salary, which has helped greatly to attract physicians to the program, and as a result the pool of physicians has grown so that more communities can be served. She indicated that they like to have a ratio of one primary care physician to a population of 4,000, but there are many other factors involved in physician placement.

One of the problems she is currently engaged in is helping communities in need to prepare the necessary applications and organizations needed. — REPORT RECEIVED.

NAVAJO HEALTH AUTHORITY

Mr. Thomas J. Stewart, Director of Research and Evaluation of the subject group, outlined a planned survey of rural physicians in Arizona, New Mexico and Utah. The general purpose of the survey is to determine the reasons why physicians decide to locate in rural areas. Mr. Stewart asked for support and endorsement of the survey.

It was moved and carried to recommend to the Board of Directors that this Association endorse the proposed survey without financial obligation.

ACTION PLAN FOR PHYSICIAN RECRUITMENT

Mr. Robinson briefly reviewed the newly created AMA packet on the subject matter. — RECEIVED FOR INFORMATION.

HEALTH MANPOWER — GENERAL REVIEW

R.N.'s

The problem of junior college nursing students moving on to University level nursing education was discussed. The idea that credits from the junior college were not acceptable at the University level was expressed.

Mr. Robinson was instructed to contact the University level nursing schools to clarify this matter.

Limited Licenses for Physicians

Utilization of the limited license to attract physicians to rural areas was discussed.

Mr. Robinson was asked to develop up-to-date information on the extent the limited license is used, as well as requirements, for the next meeting.

Physician's Assistants

Mr. Robinson was asked to develop current information on utilization of the P.A. in Arizona. Also to contact those physicians who are currently using the P.A.

Meeting adjourned 9:16 p.m.

William E. Crisp, M.D.
Secretary



Future Medical Meetings

PHOENIX PSYCHIATRIC COUNCIL CONTINUING EDUCATION PROGRAM

September 1974 — May 1975
Arizona Medical Association Offices
810 W. Bethany Home Rd.
Phoenix, AZ 85013

SPONSOR: Phoenix Psychiatric Council

CONTACT:

Robert H. Barnes, M.D.
525 N. 18th St.
Phoenix, AZ 85006

Approved for 2 required hours per session toward the ArMA Certificate in Continuing Medical Education.

A.S.R.T. ANNUAL SEMINAR (7TH) FOR RESPIRATORY THERAPY

September 17-19, 1974
8 A.M.-5 P.M.
Double Tree Inn, Tucson, AZ

SPONSOR: Arizona Society for Respiratory Therapy Inc.

CONTACT:

Joseph St. Charles ARIT
Tucson General Hospital
Tucson, AZ 85719

Approved for 13 required hours toward the ArMA Certificate in Continuing Medical Education.

RELEVANCE OF COMMUNITY MENTAL HEALTH TODAY

September 20-21, 1974
Double Tree Inn, Tucson, AZ

SPONSOR: Arizona Psychiatric Society

CONTACT:

Allan Beigel, M.D.
1930 E. 6th Street
Tucson, AZ 85719

Approved for 12 required hours toward the ArMA Certificate in Continuing Medical Education.

SURGERY OF THE HAND

September 21, 1974
8 A.M.-12:30 P.M.
Marshall Auditorium — Tucson Medical Center

SPONSOR: Tucson Hospitals Medical Education Program

CONTACT:

Peter J. Whitney, M.D.
Coordinator, Surgical Training
Tucson Medical Center
Tucson, AZ 85716

Approved for 4 required hours toward the ArMA Certificate in Continuing Medical Education.

PRESCOTT VETERANS ADMINISTRATION CENTER CONTINUING MEDICAL EDUCATION PROGRAM

September 1974
1:30 P.M., Bldg. 28, VAC Prescott, AZ

September 5 — Surgical Management of Oral Cancer
September 12 — Use and Abuse of Oxygen
September 19 — Iron Deficiency Anemia & Grand Rounds
September 26 — Insulin Resistance

SPONSOR: Veterans Administration

CONTACT:

Charles A. Trahern, M.D.
Coordinator, Continuing Medical Education
Veterans Administration Center
Prescott, AZ 86301

Approved for 1½ required hours per session toward the ArMA Certificate in Continuing Medical Education.

JAUNDICE IN THE FIRST FIVE DAYS OF LIFE

September 12, 1974
September 12, 1974 — 7:30 P.M.
Copper Queen Hospital Clinic, Waiting Room
Bisbee, AZ

SPONSOR: Copper Queen Hospital Medical Staff

CONTACT:

Elsa J. Sell, M.D.
Arizona Medical Center
U of A
Tucson, AZ 85724

Approved for 2 required hours toward the ArMA Certificate in Continuing Medical Education.

TUBERCULOSIS TODAY

October 1-3, 1974
Los Olivos Hotel, Phoenix, AZ

SPONSOR: Arizona Lung Assoc., Phoenix Area Indian Health Service

CONTACT:

Michael Cynamon, M.D.
1440 E. Indian School Rd.
Phoenix, AZ

Approved for 15 required hours toward the ArMA Certificate in Continuing Medical Education.

INFECTIOUS DISEASE 1974

October 3 & 4, 1974
Gallup Indian Medical Center
Gallup, N.M.

SPONSOR: Indian Health Service

CONTACT:

Marlene E. Haffner, M.D.
P. O. Box 1337 G
Gallup, New Mexico

Approved for 12 required hours toward the ArMA Certificate
in Continuing Medical Education.

AN UPDATE ON PSYCHOTROPIC DRUGS

October 4, 1974
Personnel & Education Bldg.
Arizona State Hospital
Phoenix, AZ

SPONSOR: Arizona State Hospital

CONTACT:

Eli Schlossberg, R.Ph.
Arizona State Hospital
2500 E. Van Buren
Phoenix, AZ

Approved for 3 required hours toward the ArMA Certificate
in Continuing Medical Education.

FOR THE PHYSICIAN IN PRIVATE PRACTICE: DIAGNOSIS AND MANAGEMENT OF THE CHILD WITH MINIMAL BRAIN DYSFUNCTION

October 5, 6, 1974
Scottsdale Hilton Hotel, Scottsdale, AZ

SPONSOR: Good Samaritan Hospital, University
of Arkansas Medical Center, Arizona
Chapter, American Academy of Pediatrics.

CONTACT:

Clarence R. Laing, M.D.
Good Samaritan Hospital
1033 E. McDowell Rd.
Phoenix, AZ 85006

Approved for 10 required hours toward the ArMA Certificate
in Continuing Medical Education.

WORKSHOP FOR TEACHERS IN FAMILY PRACTICE TRAINING

October 6-9, 1974
Tanque Verde Guest Ranch, Tucson, AZ

SPONSOR: Dept. of Family & Community Medicine
U of A College of Medicine
Tucson, AZ

CONTACT:

Anthony F. Vuturo, M.D.
Dept. of Family & Community Medicine
U of A College of Medicine
Tucson, AZ 85724

Approved for 24 required hours toward the ArMA Certificate
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PROBLEM ORIENTED FAMILY PRACTICE REVIEW COURSE

October 10-13, 1974

SPONSOR: Dept. of Family & Community Medicine
U of A College of Medicine
Tucson, AZ 85724

CONTACT:

Anthony F. Vuturo, M.D.
Dept. of Family & Community Medicine
U of A College of Medicine
Tucson, AZ 85724

Approved for 30 required hours toward the ArMA Certificate
in Continuing Medical Education.

ARTHRITIS SERVICES PROGRAM

October 26, 1974
Arizona Medical Center, Tucson, AZ

SPONSOR: Arthritis Services Program

CONTACT:

Beth Ziebell
3813 E. 2nd St.
Tucson, AZ

Approved for 6 required hours toward the ArMA Certificate
in Continuing Medical Education.

VECTORCARDIOGRAPHY — A BASIC WORKSHOP

October 7-9, 1974
Good Samaritan Hospital, Phoenix, AZ

SPONSOR: American College of Cardiology,
Institute for Cardiovascular
Diseases, Good Samaritan Hospital

CONTACT:

Alberto Benchimol, M.D.
Institute for Cardiovascular Diseases
1033 E. McDowell Road
Phoenix, AZ 85006

POST-CONFERENCE — TRAVEL STUDY PROGRAM

October 14-18, 1974
Guadalajara Hilton
Guadalajara, Sonora, Mexico

SPONSOR: Dept. of Family & Community Medicine
U of A College of Medicine
Tucson, AZ 85724

CONTACT:

Anthony F. Vuturo, M.D.
Dept. of Family & Community Medicine
U of A College of Medicine
Tucson, AZ 85724

Approved for 18 required hours toward the ArMA Certificate
in Continuing Medical Education.

**REGIONAL MEETING
AMERICAN COLLEGE OF PHYSICIANS**

November 1, 2, 1974
Camelback Inn, Phoenix, Arizona

SPONSOR: Arizona Chapter, American College of Physicians

CONTACT:

E. B. Waldmann, M.D.
350 W. Thomas Road
Phoenix, AZ 85013
Ashton B. Taylor, M.D.
444 W. Osborn Road
Phoenix, AZ 85013

Approved for 9 required hours toward the ArMA Certificate
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THE GALLBLADDER, LIVER AND PANCREAS

8 a.m. to 5 p.m., November 2, 1974
Maricopa County General Hospital

SPONSOR: Maricopa County General Hospital

CONTACT:

Marcy L. Sussman, M.D., Chairman
Alex Newman, M.D.
Dept. of Radiology
Maricopa County General Hospital
2601 E. Roosevelt
Phoenix, AZ 85008

Approved for 8 required hours toward the ArMA Certificate
in Continuing Medical Education.

**MANAGEMENT OF ACUTE SPINAL
CORD INJURIES**

November 6-8, 1974
Safari Convention Center
Scottsdale, AZ

SPONSOR: American Academy of Orthopedic Surgeons

CONTACT:

John S. Young, M.D.
Good Samaritan Hospital
1033 E. McDowell Rd.
Phoenix, AZ 85006

Approved for 18 required hours toward the ArMA Certificate
in Continuing Medical Education.

**22nd ANNUAL MEETING OF THE MEDICAL
SOCIETY OF THE UNITED STATES AND MEXICO**

November 6-9, 1974
Guadalajara, Jalisco, Mexico

SPONSOR: Medical Society of USA & Mexico

CONTACT:

Lucy A. Verneti, M.D.
333 West Thomas Rd., #207
Phoenix, AZ 85013

Approved for 12 required hours toward the ArMA Certificate
in Continuing Medical Education.

**PHYSICIANS TRAINING PROGRAM AS
PART OF ARTHRITIS SERVICES PROGRAM**

July 1, 1974 - June 30, 1975
Arizona Medical Center, Tucson, AZ

SPONSOR: Arizona Medical Center and
Arthritis Services Program

CONTACT:

Beth Ziebell
3813 E. 2nd St.
Tucson, AZ

Approved for 40 required hours toward the ArMA Certificate
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BI-MONTHLY MEDICAL EDUCATION SEMINAR

Every other Wed. AM
Begin 7/3/74

Maryvale Samaritan Hospital, Phoenix, AZ

SPONSOR: Medical Staff Maryvale Hospital

CONTACT:

Thomas J. Groves, M.D.
6037 W. Elm St.
Phoenix, AZ 85033

Approved for 1 required hour per session toward the ArMA
Certificate in Continuing Medical Education.

CAMELBACK HOSPITAL CLINICAL CONFERENCE

3rd Tuesday monthly
Camelback Hospital, Phoenix, AZ

SPONSOR: Camelback Hospital

CONTACT:

Stuart M. Gould, Jr., M.D.
Medical Director
Camelback Hospital
5055 N. 34th St.
Phoenix, AZ 85018

Approved for 1 elective hour per session toward the ArMA
Certificate in Continuing Medical Education.

PATIENT STAFFING CONFERENCE

Three times weekly
Camelback Hospital, Phoenix, AZ

SPONSOR: Camelback Hospital

CONTACT:

Stuart M. Gould, Jr., M.D.
Medical Director
Camelback Hospital
5055 N. 34th St.
Phoenix, AZ 85018

Approved for 1 elective hour per conference toward the ArMA
Certificate in Continuing Medical Education.

MORBIDITY & MORALITY CONFERENCE

2nd Monday, Monthly, 12:45 p.m.
Scottsdale Memorial Hospital, Scottsdale, AZ

SPONSOR: Medical Staff

CONTACT:

R. C. Good, M.D.
Dir. Medical Education
7300 E. 4th St.
Scottsdale, AZ

Approved for 1 elective hour per conference toward the ArMA Certificate in Continuing Medical Education.

SURGICAL GRAND ROUNDS 4TH TUESDAY OF EACH MONTH

Hospital Auditorium
Baptist Hospital, Phoenix

SPONSOR: Baptist Hospital Phoenix

CONTACT:

James B. Shields, M.D.
6036 N. 19th Ave.
Phoenix, AZ 85015

Approved for 1½ required hours per month toward the ArMA Certificate in Continuing Medical Education.

CLINICAL PATHOLOGICAL CONFERENCE

4th Monday, Monthly, 12:45 p.m.
Scottsdale Memorial Hospital, Scottsdale, AZ

SPONSOR: Medical Staff

CONTACT:

R. C. Good, M.D.
Director of Medical Education
7300 E. 4th St.
Scottsdale, AZ

Approved for 1 elective hour per conference toward the ArMA Certificate in Continuing Medical Education.

CARDIOLOGY CONFERENCE

Weekly — Friday 8-9 a.m.
St Mary's Hospital Auditorium
Tucson, AZ

SPONSOR: St. Mary's Hospital

CONTACT:

A. L. Forte, M.D.
St. Mary's Hospital
Tucson, AZ 85724

Approved for one required hour toward the ArMA Certificate in Continuing Medical Education.

MEDICAL GRAND ROUNDS

3rd Monday, Monthly, 12:45 p.m.
Scottsdale Memorial Hospital, Scottsdale, AZ

SPONSOR: Medical Staff

CONTACT:

R. C. Good, M.D.
Dir. of Medical Education
7300 E. 4th St.
Scottsdale, AZ

Approved for 1 elective hour per conference toward the ArMA Certificate in Continuing Medical Education.

PROBLEM CASE WORKSHOPS

3rd Monday of each month 7:30 a.m.
Room 4410, Arizona Medical Center, Tucson, AZ

SPONSOR: Division of Ophthalmology, U of A
College of Medicine

CONTACT:

H. E. Cross, M.D., Ph.D.
Arizona Medical Center
Dept. of Surgery
Tucson, AZ

Approved for 2 required hours toward the ArMA Certificate in Continuing Medical Education.

FAMILY PRACTICE CONFERENCE

1st Monday, Monthly, 12:45 p.m.
Scottsdale Memorial Hospital, Scottsdale, AZ

SPONSOR: Medical Staff

CONTACT:

R. C. Good, M.D.
Dir. of Medical Education
7300 E. 4th St.
Scottsdale, AZ

Approved for 1 elective hour per conference toward the ArMA Certificate in Continuing Medical Education.

CLINICAL CANCER CONFERENCE

3rd Wednesday Every Month
Butler Bldg. Conference Room
Good Samaritan Hospital, Phoenix, AZ

SPONSOR: Good Samaritan Hospital

CONTACT:

John A. Bruner, M.D.
926 E. McDowell Road
Phoenix, AZ 85006

Approved for 1 required hour per session toward the ArMA Certificate in Continuing Medical Education.

TURFVIEW CENTER PROJECT

We need Organizers for Board of Directors to set up company for the purpose of developing 20 acres of land in vicinity of Turf Paradise Race Track, on Bell Road. This center will include MEDICAL CLINIC, NURSING HOME AND RETIREMENT CENTER, with future plans for the development of neighborhood shopping center, as the need develops.

Financing is available for the first phase of this development, with additional financing to be arranged for as the needs arise. Investors will not need to put up money at the outset, and may participate in any one phase of the development, or in the entire development.

Nearest major medical facilities are more than five miles away from this fast growing area, with almost 10,000 residents now living within walking distance of project, with several hundred more to be created by the development of this project.

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The "Asociación de Médicos Mexicanos, A.C." is carrying on a project named "Ammacatzlán," based on the construction of a Hotel-Club in Mazatlán. We actually have a lot on the beach, located between the Camino Real and the Holiday Inn hotels.

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There will be a swimming pool, splash pool, garden and a parking lot.

Our shareholders will be able to reside there as many days as shares they own—paying only the service-maintenance fee, which, according to an economic study made, will be about \$14 a day.

The price of the share (\$110) is established by its nominal value (\$100) and a premium (\$10) for organization expenses. Until the shares subscription is completed, the share nominal will be deposited in the joint savings account which our Association has in Financiera Comermex and it will accumulate 8.374% annual interest, with capitalization every three months. If the promotion should fail, the shareholders' money, plus the accumulated interest, will be returned to them.

We request from our American colleagues who may be interested in this joint venture to fill out the coupon below and send it back to us.

Asociación de Médicos Mexicanos, A.C.
Leandro Valle No. 93 Nte.
Torreón, Coah.
México.

I am interested in the "Ammacatzlán" Hotel-Club project.
Please send illustrated pamphlet to:

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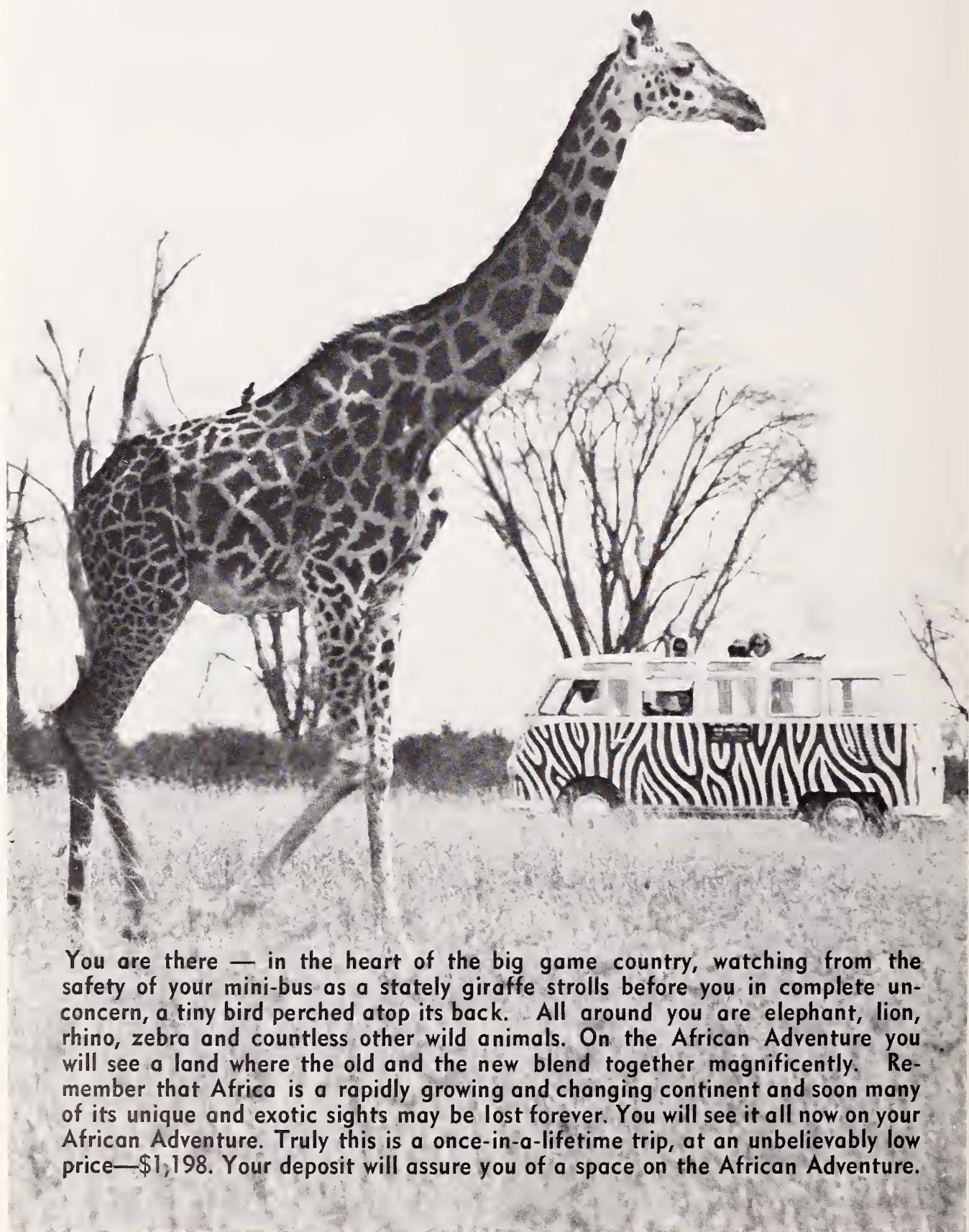
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Phoenix, Arizona
March 29, 1975



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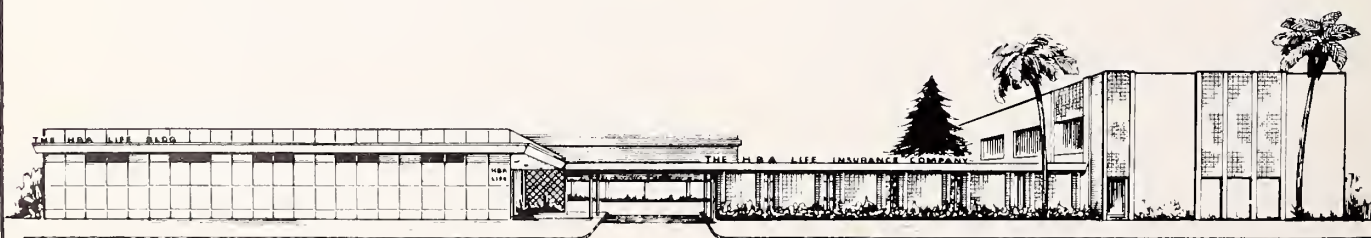
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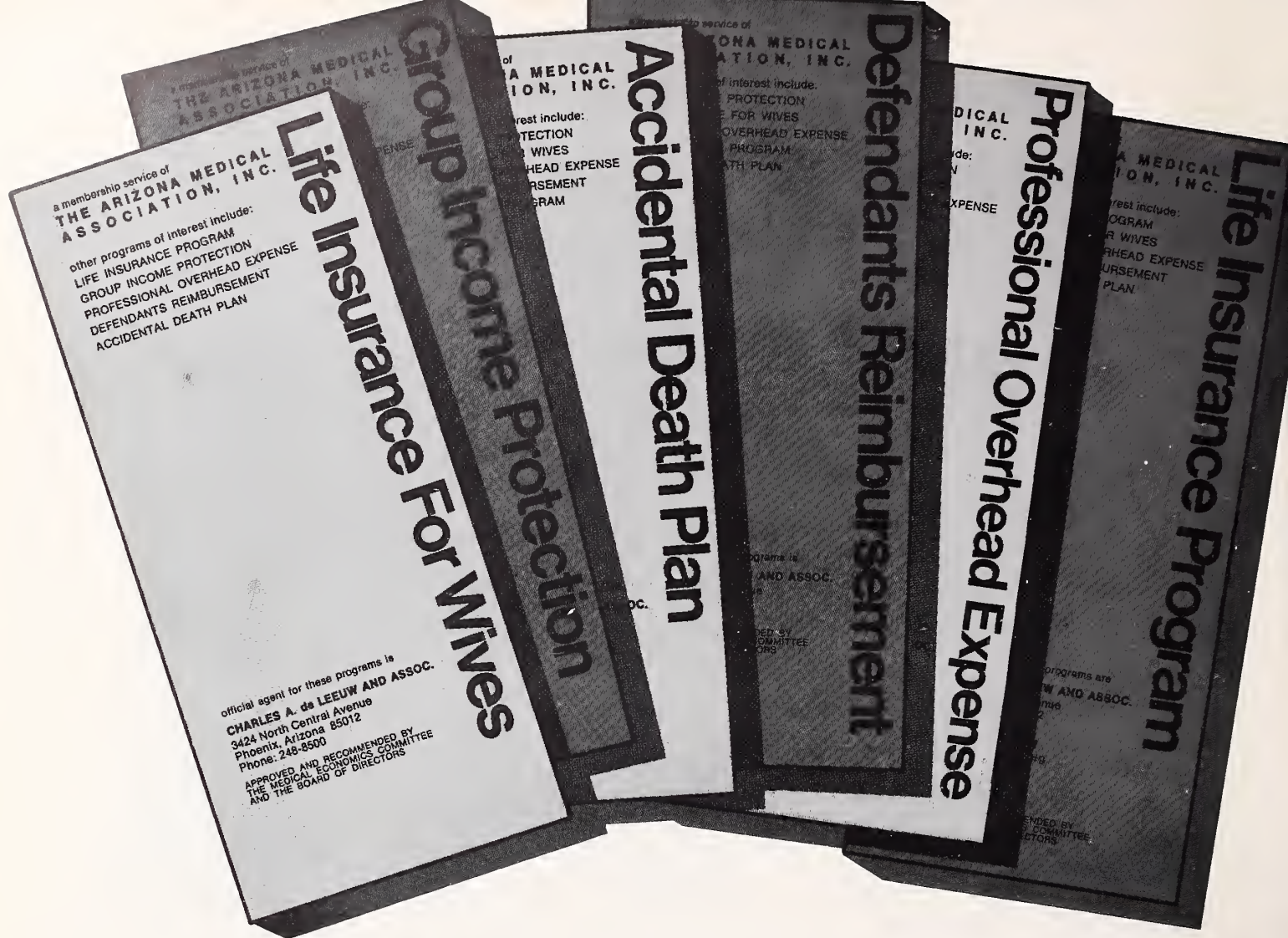


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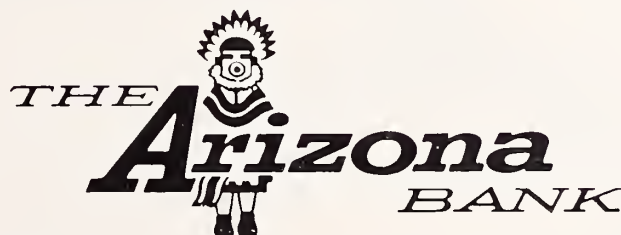
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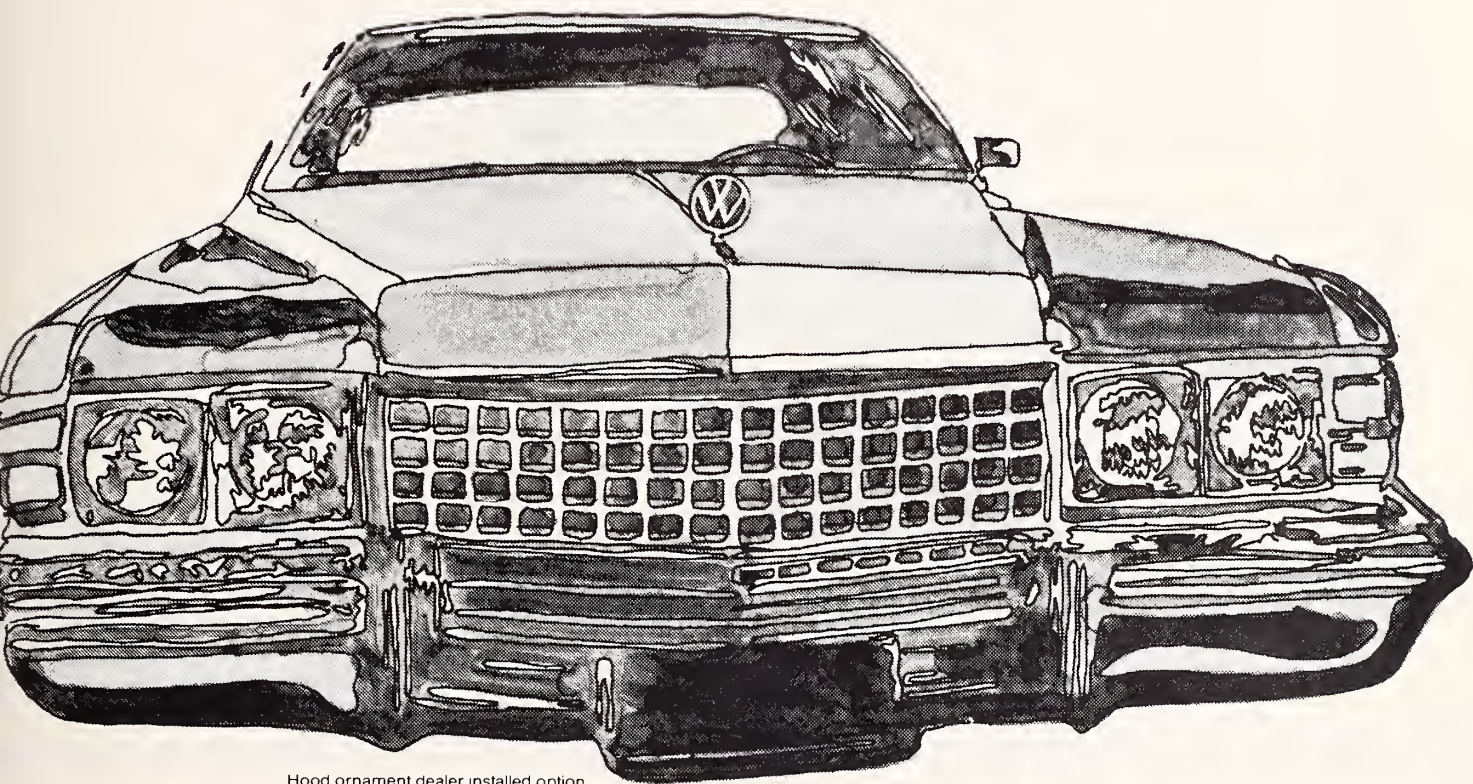
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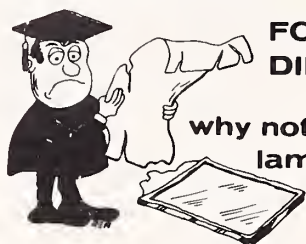
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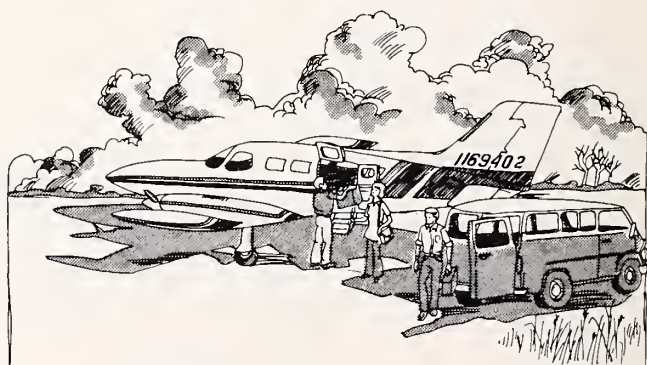
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how to civilize the of peptic ulcer...

give pain killers?...prescribe frequent eating?...use antacids only

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They relieve pain but may cause patient drug dependency and unnecessary sedation.

prescribe frequent eating only?

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Fever and possibly heat stroke may occur due to anhidrosis.

In theory a curare-like action may occur, with loss of voluntary muscle

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Precautions: Since varying degrees of urinary hesitancy may be evidenced by elderly males with prostatic hypertrophy, such patients should be advised to micturate at the time of taking the medication.

Overdosage should be avoided in patients severely ill with ulcerative colitis.

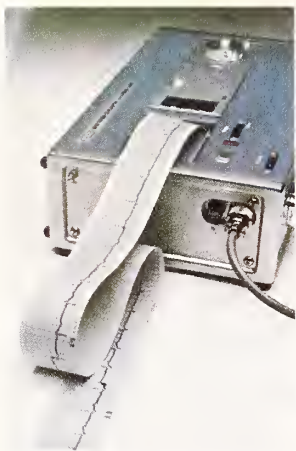
Adverse Reactions: Varying degrees of drying of salivary secretions may

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Why add Librium® (chlordiazepoxide HCl) to your cardiovascular regimen?

Excessive anxiety in susceptible patients can set in motion a chain of responses which add to the heart's work and thereby increase the possibility of cardiovascular complications. Furthermore, intense anxiety may interfere with effective medical management since some patients, in an attempt to deny their illness, may resist acceptance of necessary medication, dietary restrictions and other therapeutic directives. When counseling and reassurance alone are inadequate to

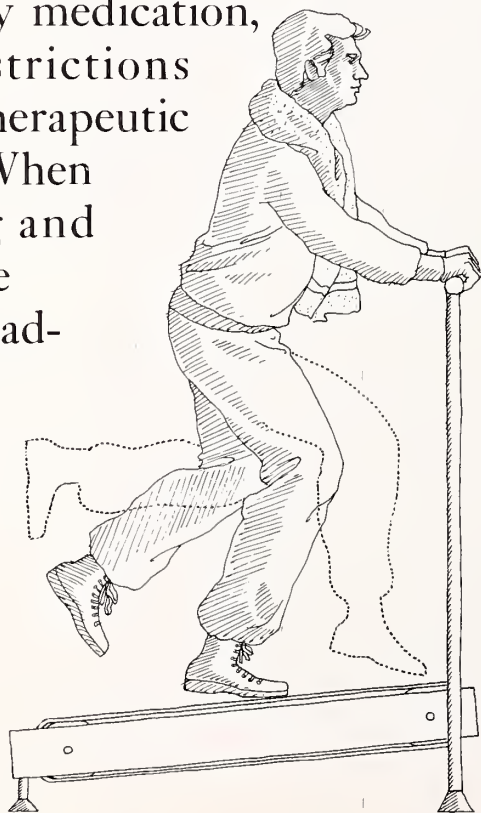


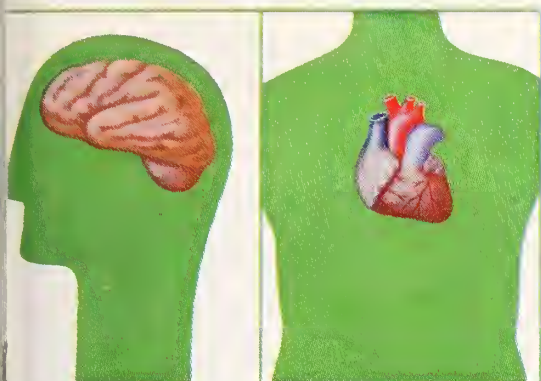
relieve undue anxiety, adjunctive Librium (chlordiazepoxide HCl) may be beneficial.

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wide margin of safety**

Librium is used as an adjunct to primary cardiovascular medications, since it acts directly on the central nervous system, reducing excessive anxiety and emotional tension. In so doing, Librium indirectly affects cardiovascular function.

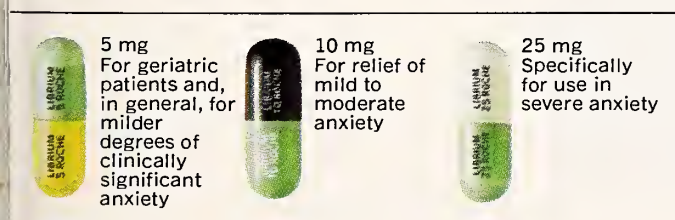
Librium has a high degree of antianxiety effectiveness with a wide margin of safety. In proper dosage, Librium usually helps calm the overanxious patient without unduly interfering with mental acuity or general performance. In the elderly and debilitated, the initial dosage is 5 mg *b.i.d.* or less to preclude ataxia or oversedation, in





creasing gradually as needed and tolerated.

Librium is used concomitantly with certain specific medications of other classes of drugs, such as cardiac glycosides, diuretics, antihypertensive agents, vasodilators and anticoagulants. Although clinical studies have not established a cause and effect relationship, physicians should be aware that variable effects on blood coagulation have been reported very rarely in patients receiving oral anticoagulants and Librium. After anxiety has been reduced to tolerable levels, Librium therapy should be discontinued.



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adjunctive

Librium® 10 mg
chlordiazepoxide HCl)
1 or 2 capsules t.i.d./q.i.d.



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Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

Supplied: Librium® Capsules containing 5 mg, 10 mg or 25 mg chlordiazepoxide HCl. Libritabs® Tablets containing 5 mg, 10 mg or 25 mg chlordiazepoxide.



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Servings per container	32
Calories	100
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Carbohydrate	0 grams
Fat	11 grams
*Percent of calories from fat	99%
*Polyunsaturated	3 grams
*Saturated	2 grams
*Cholesterol	0 (0. per 100 grams)
Sodium	120 milligrams (865 mg./100 gm.)

Percentage of U.S. recommended daily allowances
(U.S. RDA)

Vitamin A 10%

Contains less than 2 percent of the U.S. RDA of protein, Vitamin C, thiamine, riboflavin, niacin, Calcium, and iron.

*Information on fat and cholesterol content is provided for individuals who, on the advice of a physician, are modifying their total dietary intake of fat and cholesterol

IMPERIAL

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Servings per container	32 (per pound container)
Calories	100
Protein	0 (not a significant source of protein)
Carbohydrate	0
Fat	11 grams
Percent of calories from fat	over 99%
**Polyunsaturated	3 grams
**Saturated	2 grams
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Percent of calories from fats	100%
Polyunsaturated	5 grams
Saturated	2 grams
Contains no cholesterol	

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OCTOBER 1974/Vol. 31, No. 10

ARIZONA MEDICINE

JOURNAL OF ARIZONA MEDICAL ASSOCIATION

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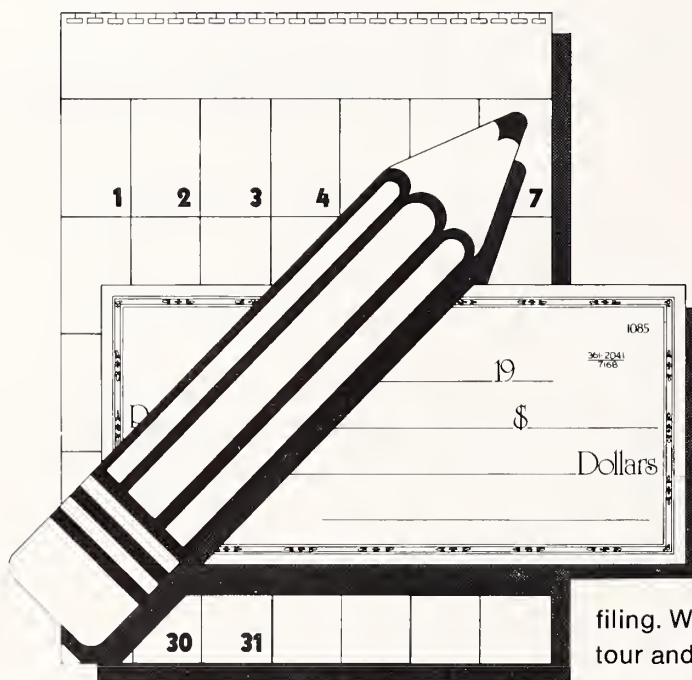
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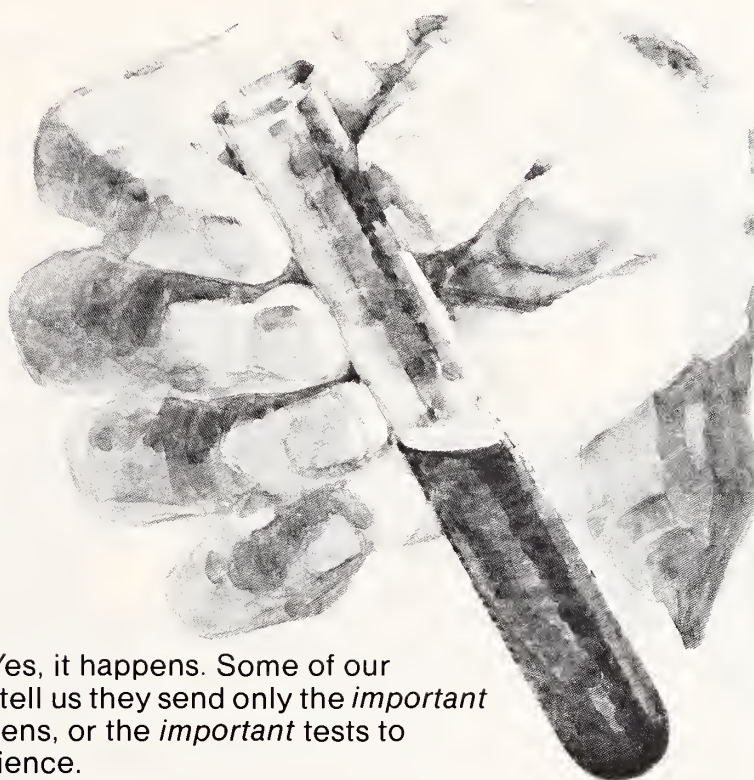
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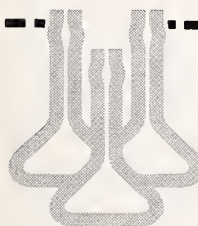
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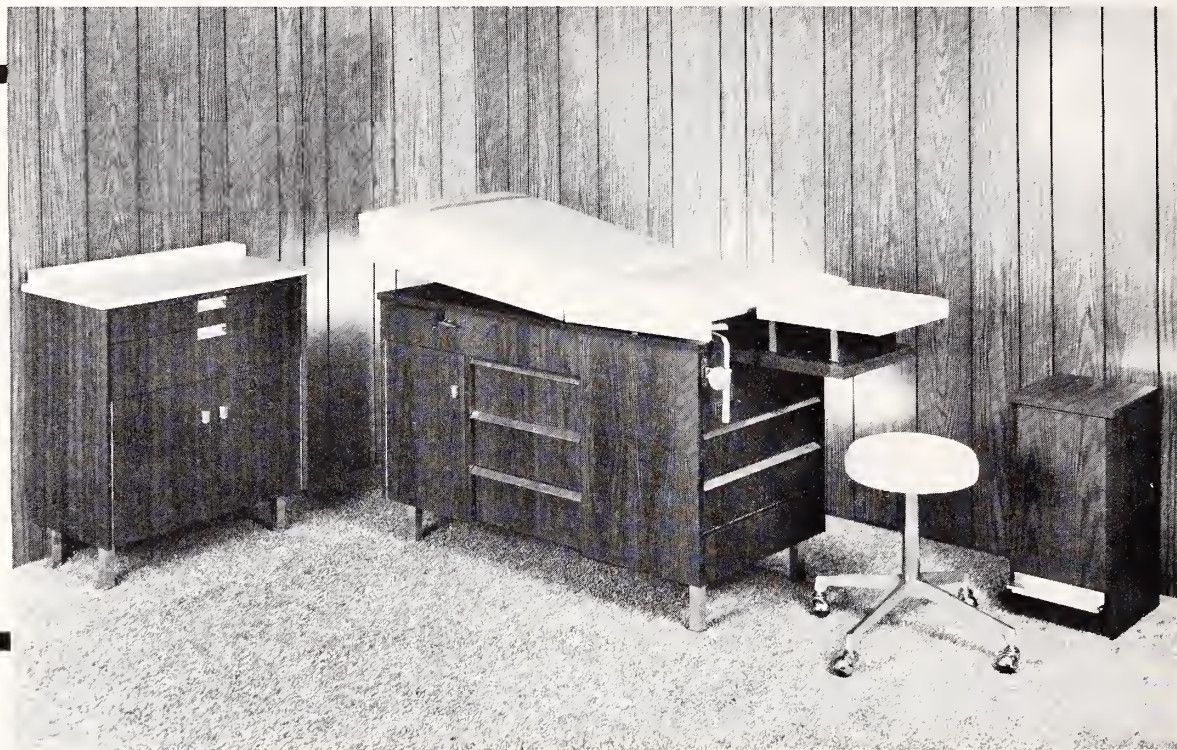
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Cold or



Allergy?

Whether it's a cold or an allergy, Dimetapp Extentabs® effectively relieve stuffiness, drip and congestion.

INDICATIONS: Dimetapp Extentabs are indicated for symptomatic relief of allergic manifestations of upper respiratory illnesses, such as the common cold, seasonal allergies, sinusitis, rhinitis, conjunctivitis and otitis. In these cases it quickly reduces inflammatory edema, nasal congestion and excessive upper respiratory secretions, thereby affording relief from nasal stuffiness and postnasal drip.

CONTRAINDICATIONS: Hypersensitivity to antihistamines of the same chemical class. Dimetapp Extentabs are contraindicated during pregnancy and in children under 12 years of age. Because of its drying and thickening effect on the lower respiratory secretions, Dimetapp is not recommended in the treatment of bronchial asthma. Also, Dimetapp Extentabs are contraindicated in concurrent MAO inhibitor therapy.

WARNINGS: *Use in children:* In infants

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PRECAUTIONS: Administer with care to patients with cardiac or peripheral vascular diseases or hypertension. Until the patient's response has been determined, he should be cautioned against engaging in operations requiring alertness such as driving an automobile, operating machinery, etc. Patients receiving antihistamines should be warned against possible additive effects with CNS depressants

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ADVERSE REACTIONS: Adverse reactions to Dimetapp Extentabs may include hypersensitivity reactions such as rash, urticaria, leukopenia, agranulocytosis, and thrombocytopenia; drowsiness, lassitude, giddiness, dryness of the mucous membranes, tightness of the chest, thickening of bronchial secretions, urinary frequency and dysuria, palpitation, hypotension/hypertension, headache, faintness, dizziness, tinnitus, incoordination, visual disturbances, mydriasis. CNS-depressant and less often stimulant effect, anorexia, nausea, vomiting, diarrhea, constipation, and epigastric distress.

HOW SUPPLIED: Light blue Extentabs in bottles of 100 and 500.

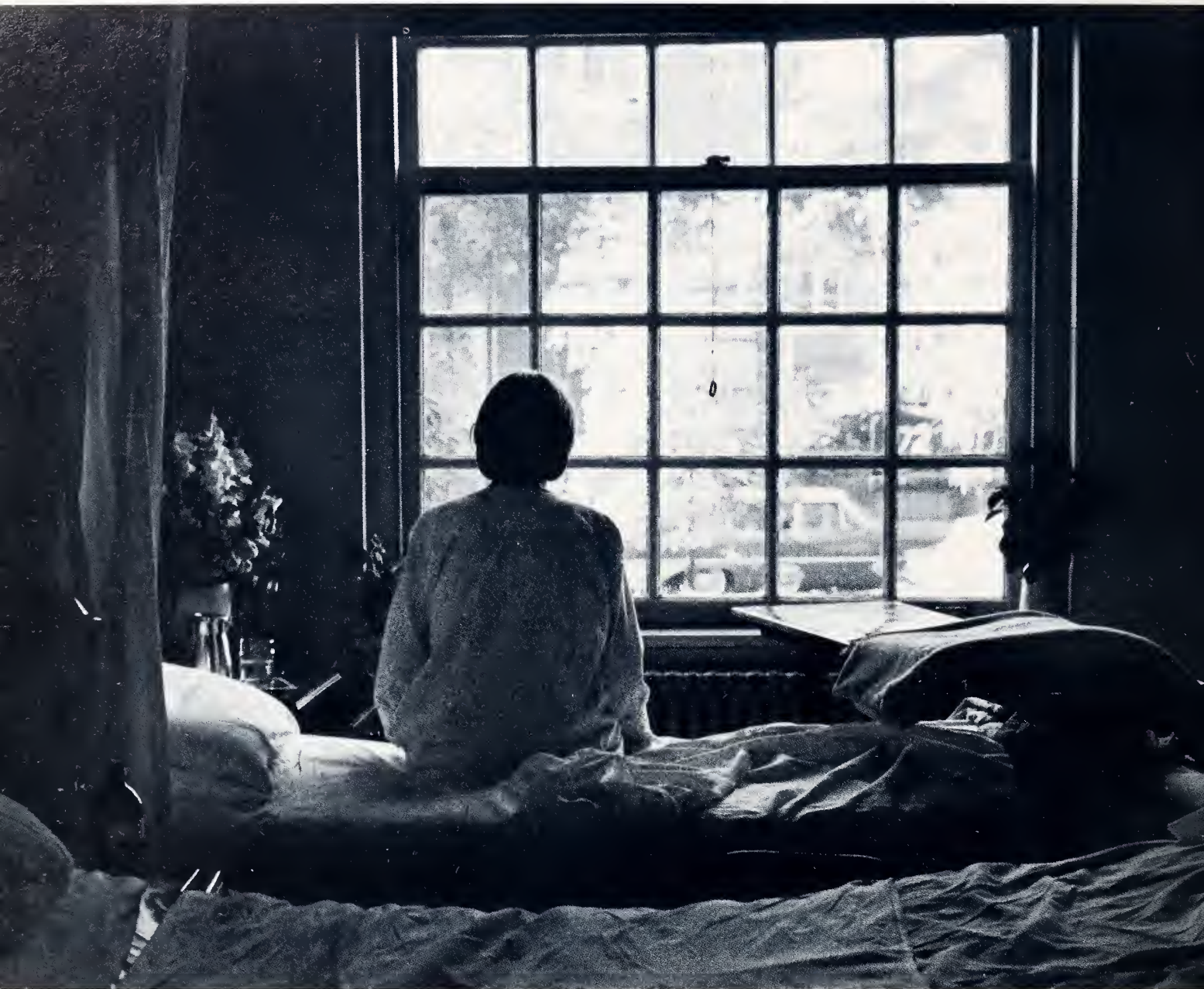
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Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (> 5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities.

Accordingly, check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently — both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk.

This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Anti-hypertensive effects may be enhanced in post-sympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

Adverse Reactions: Muscle cramps, weakness, lizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting may indicate electrolyte imbalance, diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

Supplied: Bottles and Single Unit Packages of 100 capsules.

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KEEP THE HYPERTENSIVE PATIENT ON THERAPY

KEEP THERAPY SIMPLE WITH

DYAZIDE®

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Each capsule contains 50 mg. of Dyrenium® (brand of triamterene) and 25 mg. of hydrochlorothiazide.

No potassium supplements

No special K⁺ rich diets

Just 'Dyazide' once daily or twice daily



Studies have demonstrated that two prime reasons patients drop out of hypertensive therapy are: (1) the patient failed to understand directions, and (2) the regimen was overly complicated.* Dosage is simple with 'Dyazide', easily understood, once or twice daily, depending on response. There's no need to complicate the regimen with potassium supplements or unwieldy potassium-rich diets.

*E.D. Freis: The Modern Management of Hypertension, V.A. Information Bulletin, 11-35.

TO KEEP BLOOD PRESSURE DOWN AND KEEP POTASSIUM LEVELS UP

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Material submitted for publication in ARIZONA MEDICINE should conform to the following policies:

1. Manuscripts, including references or bibliography, should be typewritten, double-spaced, on one side of the paper only, and the original and a carbon enclosed.

2. Be guided by the general rules of medical writing as followed by the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

3. Although the Editors try to catch inaccuracies, the ultimate responsibility is the author's.

4. Articles are accepted for publication only if they are contributed exclusively to this Journal. Ordinarily, contributors will be notified within 60 days if a manuscript is accepted for publication. Every effort will be made to return unused manuscripts.

5. The Journal reserves the right to edit all material.

6. Reprints will be supplied to the author at printing cost.

Randomycin[®]

(methacycline HCl)

CONTRAINDICATIONS: Hypersensitivity to any of the tetracyclines.

WARNINGS: Tetracycline usage during tooth development (last half of pregnancy to eight years) may cause permanent tooth discoloration (yellow-gray-brown), which is more common during long-term use but has occurred after repeated short-term courses. Enamel hypoplasia has also been reported. **Tetracyclines should not be used in this age group unless other drugs are not likely to be effective or are contraindicated.**

Usage in pregnancy. (See above **WARNINGS** about use during tooth development.) Animal studies indicate that tetracyclines cross the placenta and can be toxic to the developing fetus (often related to retardation of skeletal development). Embryotoxicity has also been noted in animals treated early in pregnancy.

Usage in newborns, infants, and children. (See above **WARNINGS** about use during tooth development.)

All tetracyclines form a stable calcium complex in any bone-forming tissue. A decrease in fibula growth rate observed in prematures given oral tetracycline 25 mg/kg every 6 hours was reversible when drug was discontinued.

Tetracyclines are present in milk of lactating women taking tetracyclines.

To avoid excess systemic accumulation and liver toxicity in patients with impaired renal function, reduce usual total dosage and, if therapy is prolonged, consider serum level determinations of drug. The anti-anabolic action of tetracyclines may increase BUN. While not a problem in normal renal function, in patients with significantly impaired function, higher tetracycline serum levels may lead to azotemia, hyperphosphatemia, and acidosis.

Photosensitivity manifested by exaggerated sunburn reaction has occurred with tetracyclines. Patients apt to be exposed to direct sunlight or ultraviolet light should be so advised, and treatment should be discontinued at first evidence of skin erythema.

PRECAUTIONS: If superinfection occurs due to overgrowth of nonsusceptible organisms, including fungi, discontinue antibiotic and start appropriate therapy.

In venereal disease, when coexistent syphilis is suspected, perform darkfield examination before therapy, and serologically test for syphilis monthly for at least four months.

Tetracyclines have been shown to depress plasma prothrombin activity; patients on anticoagulant therapy may require downward adjustment of their anticoagulant dosage.

In long-term therapy, perform periodic organ system evaluations (including blood, renal, hepatic).

Treat all Group A beta-hemolytic streptococcal infections for at least 10 days.

Since bacteriostatic drugs may interfere with the bactericidal action of penicillin, avoid giving tetracycline with penicillin.

ADVERSE REACTIONS: **Gastrointestinal** (oral and parenteral forms): anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis, inflammatory lesions (with monilial overgrowth) in the anogenital region.

Skin: maculopapular and erythematous rashes; exfoliative dermatitis (uncommon). Photosensitivity is discussed above (See **WARNINGS**).

Renal toxicity: rise in BUN, apparently dose related (See **WARNINGS**).

Hypersensitivity: urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus.

Bulging fontanels, reported in young infants after full therapeutic dosage, have disappeared rapidly when drug was discontinued.

Blood: hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia.

Over prolonged periods, tetracyclines have been reported to produce brown-black microscopic discoloration of thyroid glands; no abnormalities of thyroid function studies are known to occur.

USUAL DOSAGE: Adults—600 mg daily, divided into two or four equally spaced doses. More severe infections: an initial dose of 300 mg followed by 150 mg every six hours or 300 mg every 12 hours. Gonorrhea: In uncomplicated gonorrhea, when penicillin is contraindicated, 'Randomycin' (methacycline HCl) may be used for treating both males and females in the following clinical dosage schedule: 900 mg initially, followed by 300 mg q.i.d. for a total of 5.4 grams.

For treatment of syphilis, when penicillin is contraindicated, a total of 18 to 24 grams of 'Randomycin' (methacycline HCl) in equally divided doses over a period of 10-15 days should be given. Close follow-up, including laboratory tests, is recommended.

Eaton Agent pneumonia: 900 mg daily for six days.

Children—3 to 6 mg/lb/day divided into two to four equally spaced doses.

Therapy should be continued for at least 24-48 hours after symptoms and fever have subsided.

Concomitant therapy: Antacids containing aluminum, calcium or magnesium impair absorption and are contraindicated. Food and some dairy products also interfere. Give drug one hour before or two hours after meals. Pediatric oral dosage forms should not be given with milk formulas and should be given at least one hour prior to feeding.

In patients with renal impairment (see **WARNINGS**), total dosage should be decreased by reducing recommended individual doses or by extending time intervals between doses.

In streptococcal infections, a therapeutic dose should be given for at least 10 days.

SUPPLIED: 'Randomycin' (methacycline HCl): 150 mg and 300 mg capsules; syrup containing 75 mg/5 cc methacycline HCl.

Before prescribing, consult package circular or latest PDR information.

Rev. 6/73



WALLACE LABORATORIES
CRANBURY, NEW JERSEY 08512



**When the focus is on bronchitis due to
susceptible strains of *H. influenzae* and pneumococci***

Rondomycin[®] 300 mg.
[methacycline HCl] Capsules

Delivers from the very first dose:

**Studies show that after the first dose serum levels rapidly rise above
minimum *in vitro* inhibitory concentrations**

*Since many strains are known to be resistant, routine sensitivity testing is recommended.

The Role of the Detail Man

"I may be prejudiced, but I am very much in favor of the detail men I meet. Most of them are knowledgeable about the drugs they promote and can be a great help in acquainting me with new medication."

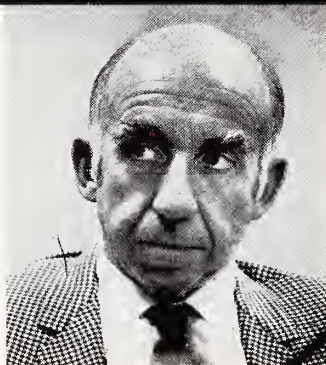
Family Physician's Perception

I think that most general practitioners in this area feel as I do about the detail man. Over the years I have gotten to know most of the men who visit me regularly and they in turn have become aware of my particular interests and the nature of my practice. They, therefore, limit their discussion as much as possible to the areas of interest to me. Since I usually see the same representative again in future visits, it is in his best interest to supply me with the most honest, factual, as well as up-to-date information about his products.

Dr. Willard Gobbell
Family Physician
Encino, California



Dr. Jeremiah Stamler
Chairman
Department of Community
Health and Preventive
Medicine, and Dingman
Professor of Cardiology
Northwestern University
Medical School



"In the total picture of dealing with health problems in this country there is a potential for detail men to play a meaningful role."

The Positive Influence

My contact with representatives and salesmen of the pharmaceutical industry is the type of contact that people in a medical center research people, and academic people have and that's in all likelihood on a somewhat different level from that of the practicing physician.

Let me touch on how I personally perceive the role of the sales representative. These men reach large numbers of health professionals. Thus they could be — and at times actually are — disseminators of useful information. They could consistently serve a real educational function in their ability to discuss their products.

At present they do distribute printed material, brochures and pamphlets — some of it scientifically sound and therefore truly useful — as well as some excellent films produced by the pharmaceutical industry. When they function in this

Opinion
&
Dialogue

Is He a Source of Information?

Yes, with certain reservations. The average sales representative has a great fund of information about the drug products he is responsible for. He is usually able to answer most questions fully and intelligently. He can also supply reprints of articles that contain a great deal of information. Here, too, I exercise some caution. I usually accept most of the statements and opinions that I find in the papers and studies which come from the larger teaching facilities. It goes without saying that a physician should also rely on other sources for his information on pharmacology.

Training of Sales Representatives

Ideally, a candidate for the position as a sales representative of a pharmaceutical company should be a graduate pharmacist who has a questioning mind. I don't think this is possible in every case, and so it becomes the responsibility

of the pharmaceutical company to train these individuals comprehensively. It is of very great importance that the detail man's knowledge of the product he represents be constantly reviewed as well as updated. This phase of the sales representative's education should be a major responsibility of the medical department of the pharmaceutical company.

I am certain that most of these companies take special care to give their detail men a great deal of information about the products they produce—information about indications, contraindications, side effects and precautions. Yet, although most of the detail men are well informed, some, unfortunately, are not. It might be helpful if sales representatives were reassessed every few years to determine whether or not they are able to fulfill their important function. Incidentally, I feel the same way about periodic assessments of everyone

in the health care field, whether they be general practitioners, surgeons or salesmen.

Value of Sampling

I personally am in favor of limited sampling. I do not use sampling in order to perform clinical testing of a drug. I feel that drug testing should rightly be left to the pharmacology researcher and to the large teaching institutions where such testing can be done in a controlled environment.

I do not use samples as a "starter dose" for my patients. I do, however, find samples of drugs to be of value in that they permit me to see what the particular medication looks like. I get to see the various forms of the particular medication at first hand, and if it is in a liquid form I take the time to taste it. In that way I am able to give my patients more complete information about the particular medications that I prescribe for them.

capacity they are indeed useful; particularly in the fact that they disseminate broadly based educational material and serve not just as "pushers" of their drugs.

The Other Side of the Coin

Obviously, the pharmaceutical companies are not producing all this material as a labor of love—they are in the business of selling products for profit. In this regard the ambitious and improperly motivated sales representative can exert a negative influence on the practicing physician, both by presenting a one-sided picture of his product, and by encouraging the practitioner to depend too heavily on drugs for his total therapy. In these ways, the salesman has often distorted objective reality and undermined his potential role as an educator.

The Industry Responsibility

Since the detail man must be an information resource as well as a representative of his particular pharmaceutical company, he should be carefully selected and

thoroughly trained. That training, perforce, must be an ongoing one. There must be a continuing battle within and with the pharmaceutical industry for high quality not only in the selection and training of its sales representatives, but also in the development of all of its promotional and educational material.

The industry must be ready to accept constructive as well as corrective criticism from experts in the field and consumer spokesmen, and be willing to accept independent peer review. The better educated and prepared the salesman is, the more medically accurate his materials, the better off the pharmaceutical industry, health professionals and the public—*i.e.*, the patients—will be.

Physician Responsibility

The practicing physician is in constant need of up-dated information on therapeutics, including drugs. He should and does make use of drug information and answers to specific questions supplied by the pharmaceutical representative. However, that informa-

tion must not be his main source of continuing education. The practitioner must keep up with what is current by making use of scientific journals, refresher courses, and information received at scientific meetings.

The practicing physician not only has the right, but has the responsibility to demand that the pharmaceutical company and its representatives supply a high level of valid and useful information. I feel certain that if such a high level is demanded by the physician as well as the public, this demand will be met by an alert and concerned pharmaceutical industry.

From my experience, my impression is that sectors of the pharmaceutical industry are indeed ethical. I challenge the industry as a whole to live up to that word in its finest sense.

*Pharmaceutical
Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005*



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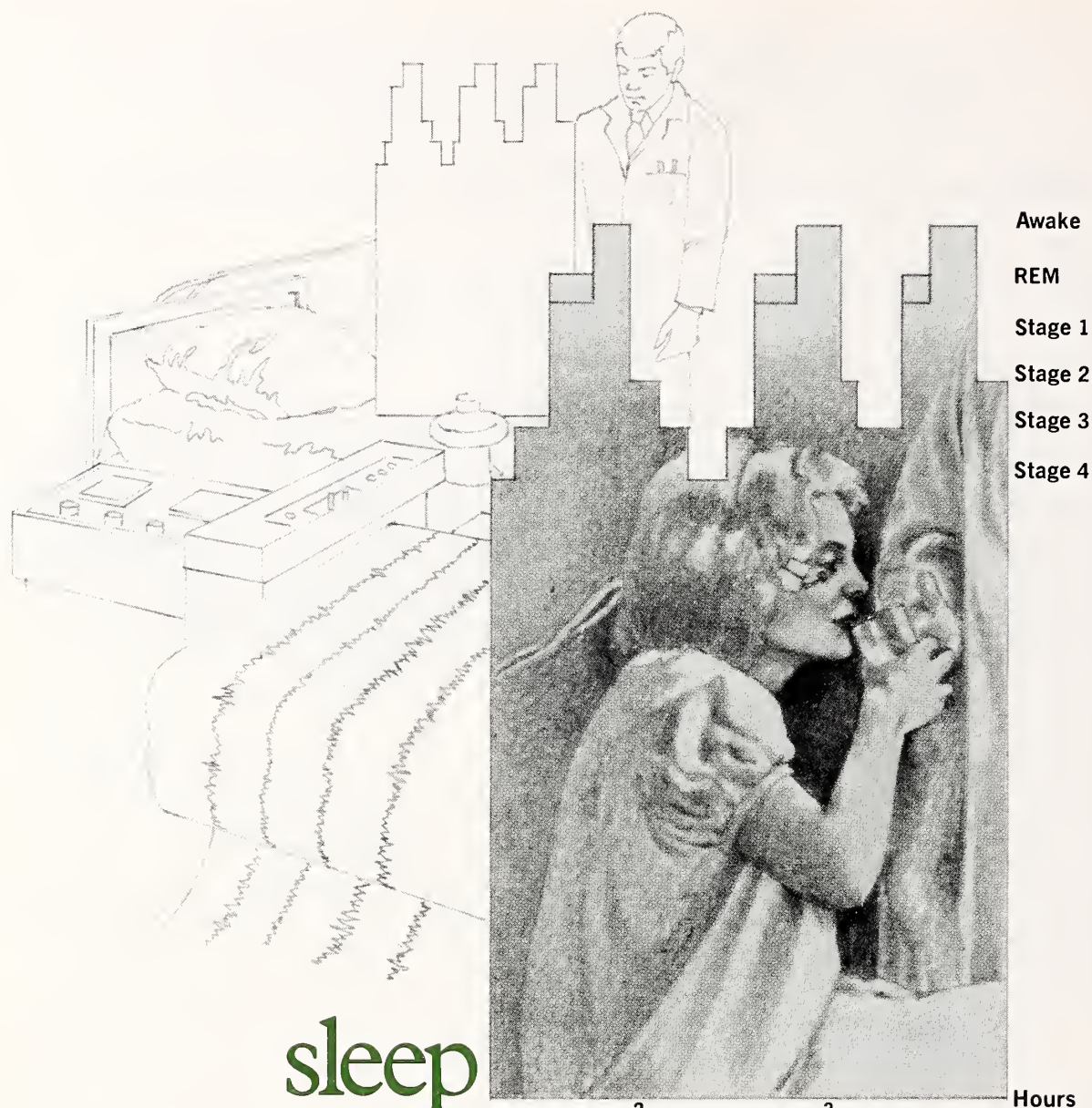
The Businessman's Bank

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A black and white photograph of a Native American-style beaded necklace. The necklace is made of dark beads with white geometric patterns, including a large star on the left and a circular motif on the right. A rectangular tag with a black background and white text is attached to the necklace. The tag features the words "NATIONAL" and "CAR RENTAL" in a stylized font, with a registered trademark symbol (®) to the right. The necklace is laid out on a light-colored surface, and a small, dark, circular object is visible near the center of the necklace.

And remember, National Car Rental System is the only car rental company that gives you S&H Green Stamps on all U.S. rentals. It's their way of saying "Thank you."

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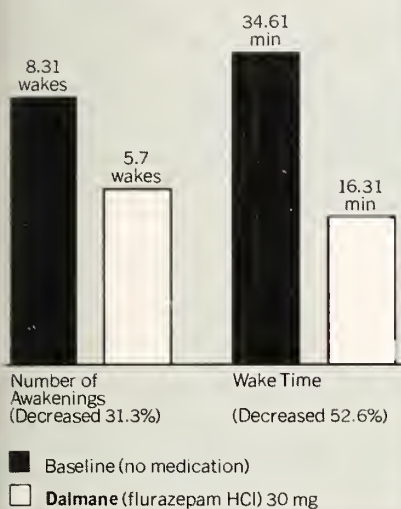


sleep
is usually maintained with
fewer nighttime awakenings...
a consistent benefit of

Dalmane[®]
(flurazepam HCl) proved by a
17-night clinical study in the sleep research
laboratory evaluating effectiveness in
insomnia patients¹

Eight patients received no medication on nights 1-4; Dalmane (flurazepam HCl) or placebo on nights 5-9; crossover capsule, nights 10-14; and no medication, nights 15-17. While placebo had no significant effect on sleep maintenance, Dalmane reduced nighttime awakenings by 55.1% when given on nights 5-9, 43.7% on nights 10-14. When four control subjects received placebo on the 10 "drug" nights, awakenings *increased* 11.5% over baseline.¹

Average Number of Awakenings and Minutes of Wake Time (4 Studies, 16 Subjects)²⁻⁵



confirmed by clinical studies in four geographically separated sleep research laboratories²⁻⁵

Using a 14-night protocol, involving eight insomniac and eight normal subjects, four studies confirmed the sleep-maintaining effectiveness of Dalmane (flurazepam HCl) and the reproducibility of this response. On average, one 30-mg capsule reduced number of awakenings by 31.3% and wake time by 52.6%. In all these studies, Dalmane induced sleep rapidly, on average within 17 minutes; reduced nighttime awakenings; and provided, on average, 7 to 8 hours of sleep without repeating dosage.²⁻⁵

Dalmane (flurazepam HCl) induces and maintains sleep, with relative safety

Dalmane is generally well tolerated; morning "hang-over" has been relatively infrequent. While dizziness, drowsiness, lightheadedness and the like have been noted most often, particularly in the elderly and debilitated, physicians should be aware of the possibility of more serious reactions, as noted in the Complete Product Information.

Before prescribing Dalmane (flurazepam HCl), please consult Complete Product Information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

Contraindications: Known hypersensitivity to flurazepam HCl.

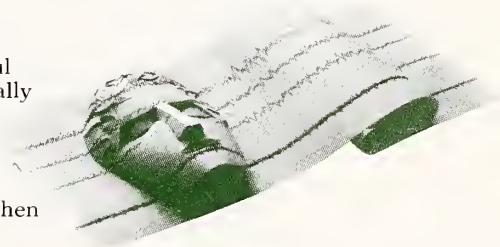
Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, e.g., excitement, stimulation and hyperactivity, have also been reported in rare instances.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.

Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.



when restful sleep is indicated **Dalmane**[®] (flurazepam HCl)

One 30-mg capsule h.s. — usual adult dosage
(15 mg may suffice in some patients).

One 15-mg capsule h.s. — initial dosage for elderly or debilitated patients.

- induces sleep within 17 minutes, on average
- reduces nighttime awakenings
- sustains sleep 7 to 8 hours, on average, without repeating dosage



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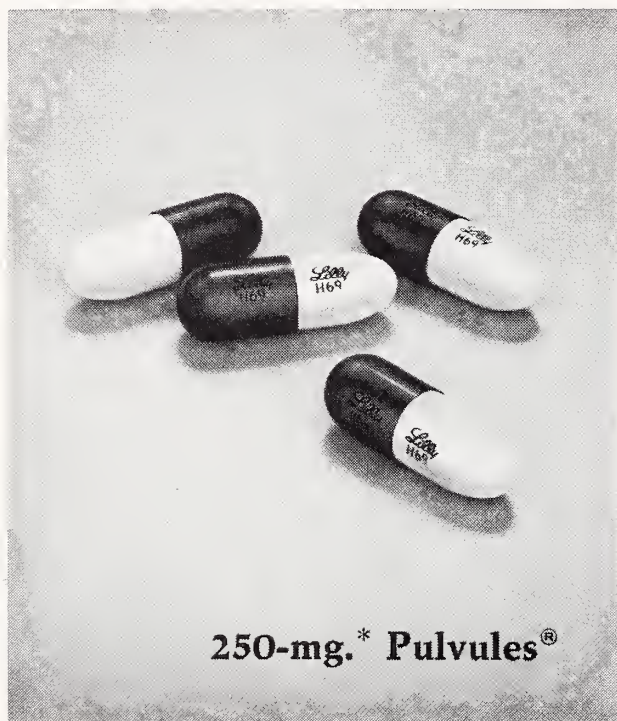
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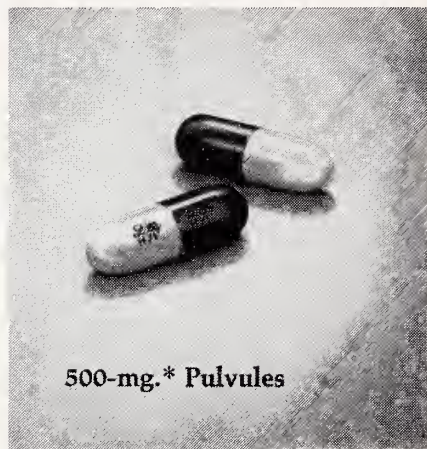
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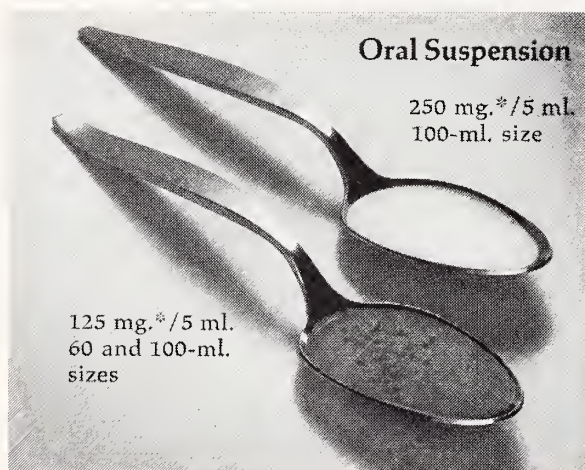
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sense*



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RICHARD J. MARTIN, M.D.



Original Articles

SHIGELLA BACTEREMIA IN AN ADULT

Although Shigellosis is not uncommon in this area, *Shigella* septicemia in an adult without demonstrable immunologic incompetence is highly unusual. This interesting article describes such a case, along with a comprehensive letter to review.

Although *Shigella* enteric infections are more common among southwestern Indians than in the general population,¹ *Shigella* septicemia has not been previously observed at the Phoenix Indian Medical Center. This report of possible contributory role of immunologic deficiency will also be considered.

CASE REPORT

A 79-year old Pima Indian man was brought to the emergency room on February 9, 1973 in an unresponsive state. He had experienced diarrhea for two days before the sudden onset of weakness which had proceeded to unresponsiveness. There was a past history of atheroscler-

otic cerebrovascular disease, with a dense hemiplegia, since 1965. Other past history included benign prostatic hypertrophy with a suprapubic prostatectomy, diabetes mellitus (controlled by diet), and one bout of pneumonia. On examination the patient was tachypneic, diaphoretic, and responsive only to painful stimuli. The heart rate was 120 beats per minute; blood pressure, 90/40 mm. Hg., and rectal temperature, 103° F (39.4°C). Laboratory studies revealed a white blood cell count of 15,000/cu. mm with a pronounced left shift and marked pyuria and bacteriuria. The blood urea nitrogen was 26 mg/100 ml. Culture of both stool and blood yielded *Shigella flexneri*. Disc sensitivity tests indicated susceptibility to chloramphenicol, sulfonamides, and tetracycline, with intermediate sensitivity to ampicillin. Serum antibodies to *S flexneri* were qualitatively positive. Urine culture yielded *Proteus mirabilis*, sensitive to ampicillin.

Prior to reports of cultures and sensitivity testing, the patient was started on intravenous rehy-

Reprint requests to: 1716 S. Jefferson Davis Parkway, New Orleans, La 70125 (Dr. Martin).

dration, electrolyte correction, and ampicillin therapy. The fever quickly abated, and the blood leukocyte count returned to normal. Treatment was continued for 14 days. His recovery was uneventful and repeat blood, urine and stool cultures were negative.

Three months later the patient again came to the emergency room with fever (rectal temperature 104° F, or 40°c) and leukocytosis (16,000/cu mm). After hospital admission, his urine, feces and blood were cultured bacteriologically, with recovery of *E. coli* from the blood. Treatment with kanamycin was instituted. On chest x-ray examination a miliary pattern of lung infiltrates was noted. Isoniazid, ethambutol, and pyridoxine were added to the therapy. Sputum culture subsequently yielded *Mycobacterium tuberculosis*. No abnormalities were found in laboratory tests for immunologic deficiencies including serum protein electrophoresis, immunoelectrophoresis, antinuclear antibodies test, lupus erythematosus preparation, and bone marrow examination. After the otherwise uncomplicated hospital course, the patient was placed in a nursing home.

DISCUSSION

This elderly Indian man had significant problems in his past medical history prior to a sudden succession of major events. Within a three-month period he developed urinary tract infection (*Proteus*), dysentery (*Shigella*), and bacteremia (*Shigella*) and, then, another episode of bacteremia (*E. coli*) and *M. tuberculosis*, miliary infection. *Shigella* bacteremia in the adult is rare and suggests the possibility of a compromised or deficient immunologic system.

The only reservoir of the *Shigella* organism is the unrecognized case.² The carrier state often lasts several weeks; and recently two long-term

Shigella carriers were reported.³ Estimates based on culture of asymptomatic populations reveal about nine unrecognized infections for every clinically diagnosed case.⁴ The Public Health Service⁵ reported 9,915 cases of *Shigella* infections in 1969. Therefore, the estimated large asymptomatic reservoir would be almost 90,000 individuals.

Shigella bacteremia occurs infrequently in children and rarely in adults. The exact frequency for either groups is unknown. Of 60,680 blood cultures of patients with bacillary dysentery at Charity Hospital in New Orleans,⁶ only two were positive for *Shigella*; both were from children. One culture yielded *S. sonnei*, the other *S. flexneri*. Both Kessel,⁷ with 60 blood cultures, and Dudgeon,⁸ in 145 attempts, reported sterile cultures for *Shigella*. Frankel⁹ obtained one positive from 49 blood cultures. Faucon¹⁰ reviewed the 1912-1962 literature and found only 101 reported cases of *Shigella* septicemia, mostly in children. In 26 blood cultures from 15 adults with shigellosis, Barrett—Connor¹¹ had all negative results.

The paucity of positive results may be misleading, as many physicians do not obtain blood cultures on their bacillary dysentery patients, and the index of suspicion is low. Also, the bacteremia is probably shortlived. At autopsy,⁶ *Shigella* organisms are frequently isolated from the mesenteric lymph nodes, liver, and spleen of patients in whom no bacteremia was demonstrated antemortem.

When *Shigella* bacteremia occurs, what is its significance regarding the course and outcome of the disease? Felson¹² analyzed the cases reported up to 1940 and found no significant correlation of bacteremia with severity of infection or mortality. Autopsy study of fatal *Shigella* bac-

teremia cases did not produce any characteristic findings.^{12, 13} Bacteremia occurs in both mild and severe cases with complete recovery, as well as in fulminating fatal cases. In the fatalities, the duration of illness was from one to 12 days, except for one case of 10 weeks duration.¹⁴ A patient who died within 48 hours with fulminating bacillary dysentery, had negative blood cultures.¹²

As evidence that *Shigella* sepsis favors complications, Rothman¹³ cites cases of arthritis, meningeal involvement, pneumonia, thrombophlebitis, and acute nephritis associated with bacteremia. Others state that, in children, pneumonitis is a well-recognized occurrence which is unassociated with *Shigella* bacteremia and responds to management without antibacterial therapy.¹⁵ Associated pneumonitis is rarely described in adults; but in one reported series, four of 30 patients had radiographic evidence of pulmonary infiltrates.¹⁶ In only one of the four cases was *Shigella* isolated from the sputum.

Among the published cases there is no proven relationship between immunologic deficiencies and sepsis with *Shigella*. However, since the vast majority of cases occur under two years of age and the present patient was 79 years old, either an immature or altered immunologic system may be significantly involved. This patient had two episodes of sepsis and developed miliary tuberculosis within a three-month period. The immunologic studies carried out on this patient fail to demonstrate a significant degree of immunologic incompetence.

The basic therapy for Shigellosis is replacement of the vast quantities of fluid and electrolytes which can be lost through the intestinal tract. The efficacy of antibacterial agents is unproven. Resistance of *Shigella* to sulfona-

mides may be as high as 80 percent; even if the original micro-organism is sensitive to sulfonamides, resistance can emerge within as little as two days.^{17, 18} Thus, this drug generally should not be used. Susceptibility is unpredictable, even to chloramphenicol or tetracycline. In 30 adult cases of nonbacteremic shigellosis, Barrett-Connor¹¹ found it difficult to demonstrate that antibacterial therapy altered or shortened the course of the illness. Also unproved is the use of antibacterial treatment for *Shigella* bacteremia. Since *Shigella* sepsis may be associated with complications, it is this author's opinion that a reasonable clinical management should include antimicrobial therapy based upon sensitivity studies.

The writer thanks Dr. Maurice Sievers for his guidance and advice on the manuscript.

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SURGERY FOR HYPERCALCEMIA



C. HERBERT FREDELL, M.D.

Dr. Fredell has emphasized the necessity for accurate diagnosis before surgery, ruling out causes of hypercalcemia other than disease of the parathyroids.

He believes that if a hypercalcemia is asymptomatic, a period of observation of at least six months should precede surgery. This is a wise suggestion. The initial enthusiasm for operating on the parathyroids merely for hypercalcemia without symptomatic disease has subsided somewhat.

His suggestions as to technique are ones that every surgeon follows.

Hypercalcemia is being found with increasing frequency since the use of routine multiphasic screening laboratory tests. When the physician learns of the presence of hypercalcemia in his asymptomatic patients he usually has three thoughts. First, is the determination valid? Second, why is the serum calcium elevated? Third, what should be done about it? This paper will be a brief answer to those questions.

To confirm the elevated serum calcium, repeat examinations are done on several occasions utilizing different laboratories and utilizing different techniques. A knowledge of the quality of control of a particular laboratory is also helpful when interpreting the results.

Reprint requests to: 120 W. Fine Ave., Flagstaff, AZ 86001 (Dr. Fredell).

Once the elevated serum calcium has been documented all causes must be considered and a diagnostic plan formulated. Table 1) The table lists the common causes of an elevated serum calcium. They are arranged into three main categories which begin with the more common causes and descend to the unusual causes of hypercalcemia. Many of the conditions do not require surgical treatment but do require careful investigation and appropriate treatment programs. The principal cause of an elevated serum calcium that can be corrected by surgical treatment is hyperparathyroidism.⁶

The causes of hyperparathyroidism are: 1. When there is primary disease in the gland with

TABLE 1 Causes of Hypercalcemia	
Laboratory Error	Hyperparathyroidism
Excess Vitamin D Intake	1. Parathyroid
Immobilization	Adenoma
Idiopathic Hypercalcemia	Hyperplasia
of Infants	Carcinoma
Milk-Alkali Syndrome	
Acute Bone Atrophy	2. Secondary
Pagets Disease	Chronic Renal
Berylliosis	Disease (Uremia)
Hyperthyroidism	3. Familial
Hyperproteinemia	Endocrine
Sarcoidosis	Adenopathies
Bone Tumor	
Multiple Myeloma	
Lymphoma	
Leukemia	
Metastatic Carcinoma	
Carcinoma of Breast	
Carcinoma of Lung (oat cell)	
Carcinoma of Kidney	
Carcinoma of Pancreas, Colon, Ovaries, Uterus	
Carcinoma of Thyroid	

secretion of excess parathyroid hormone, 2. Secondary influences upon the gland such as chronic renal disease, 3. Familial hyperparathyroidism with single and multiple endocrine adenopathies as well as the Sipple syndrome and the Zollinger-Ellison syndrome. Hyperparathyroidism may also be caused by substances that are similar to parathyroid hormone secreted from ectopic sources such as oat cell carcinoma of the lung, carcinoma of the kidney, and carcinoma of the pancreas.¹⁰

After considering the causes of hypercalcemia one must determine whether it is a primary abnormality of calcium metabolism or a manifestation secondary to some other disease. This differentiation has been difficult in the past because the only available tests were indirect. They were the renal phosphate tubular excretion, the calcium infusion, and cortisone suppression tests. The close relationship between calcium and phosphate has been utilized when the renal tubular excretion of phosphorus has been studied. The parathyroid hormone effects the kidneys directly by increasing the tubular excretion of phosphate and enhancing the calcium reabsorption from the glomerular filtrate. The nocturnal calcium infusion test has been used to determine the autonomous nature of parathyroid gland secretion. The administration of cortisone suppresses the elevated serum calcium when it is due to non parathyroid gland diseases. While indirect tests have been of value and are still

being used a more valuable and direct measurement of the radioimmunoreactive parathyroid hormone by assay method should be used. A more rapid and accurate diagnosis is often obtained by this test.

Direct evidence of parathyroid disease is quickly obtained by differentiating hypercalcemia secondary to malignancy of other organs from hypercalcemia due to parathyroid disease.¹ The parathyroid hormone substance secreted from ectopic sources is difficult to differentiate from parathyroid gland hormone and circulating fragments of the hormone. Recent reports indicate that they have different molecular weights and can be separated by specific antisera used in the assay method. Unfortunately this type of test is still not available to practicing clinicians in many communities. The direct measurement of the immunoreactive parathyroid hormone can be done on frozen specimens sent to appropriate laboratories.

Since the majority of patients now being seen with hypercalcemia are asymptomatic, most surgeons are recommending an observation period of at least six months before recommending surgical exploration for suspected parathyroid gland disease. Purnell et al⁸ are conducting a prospective study of patients with an elevated serum calcium and parathyroid hormone levels thought to be due to hyperparathyroidism. They found that surgery was eventually required in 13.8% of patients but noted that removal of the parathyroid lesion did not insure cure of the primary hyperparathyroidism. From the experience reported to date they were unable to determine which patients would develop complications from the hypercalcemia and require surgical treatment.

The indications for early surgical exploration are not always apparent even in the symptomatic patient. Unfortunately the symptoms may be bizarre and puzzling, leading the clinician to dismiss them as functional in origin. The usual complaints are urinary, musculoskeletal, and gastrointestinal in nature. These may be caused by urinary calculi, cystic bone changes, peptic ulcer or pancreatitis. Radiological examination may show typical changes. The patient is referred to as one with stones, bones, moans and groans.

When the diagnosis of parathyroid disease is made the location of the hyperfunctioning tissue is not always obvious.¹¹ Massaging first one side

and then the other side of the neck followed by separate determinations of parathyroid hormone is used by some surgeons to determine the location of the diseased gland.¹² Obtaining blood samples from each side of the venous drainage of the parathyroid glands by direct catheterization has helped in localizing the source of the elevated hormone. This procedure is used more commonly before a secondary operation for hyperparathyroidism.

Location of the diseased parathyroid was described by Cope² who described a surgical experience with 500 cases of hyperparathyroidism. In 407 the abnormal gland was located in the neck. Of the 93 in the mediastinum only 30 required mediastinotomy for removal. Of the 500 cases 63 had previous parathyroid gland surgery. Reexploration of the neck was successful in removing the abnormal gland in 47 of these cases. In addition to Cope's series of cases Krementz et al,⁷ Irvin et al,⁶ Friedman et al³ and others have reported experiences.

Wilson et al¹⁴ has reported a large series of cases of secondary hyperparathyroidism who had subtotal parathyroidectomy for patients in chronic renal failure. In recent years enthusiasm for parathyroidectomy among the renal transplantation programs has decreased markedly.⁴ Control of hypercalcemia has been done with vitamin D, calcium infusions, phosphate salts, sulfate salts and Mithramycin. Patients with acute parathyroid crises can also be treated with one or a combination of these agents.

In spite of the decrease of patients with secondary hyperparathyroidism that require surgery, there are still indications for surgery for some problems. They are: 1. those that develop pathological fractures due to osteodystrophy, 2. presence of severe bone pain, 3. progressive appearance of ectopic calcifications, 4. intractable itching and 5. when calciphylaxis occurs.⁴

Once the decision is made to operate the surgeon must be prepared for a tedious, meticulous, and thorough search for the lesion. The initial exploration should be cervical and upper mediastinal only. If necessary, mediastinotomy should be done at another time. It is not required in many instances.¹¹ When an adenoma is found the other glands must be identified to avoid overlooking other adenomas. If no adenoma is found a subtotal thyroidectomy is done. If hyperplasia is suspected it must be diagnosed by frozen sec-

TABLE 2
Surgery of Hypercalcemia
Flagstaff Hospital — 1971-1974

Patient	Age	Sex	Clinical Complaint	Lab. Findings	Procedure	Follow Up
1. M.P.	60	F	Urinary calculi	Ca-10-11 mgm%	Thyroidect Part. Parath.	No Calculi Ca-8 mgm%
2. P.L.	60	F	Cardiac arryth. SMA 12 det'n	Ca-15.2 mgm%	Para. Adenoma	Ca-9 mgm%
3. E.F.	77	F	Bone pains Elevated BP	Ca-11.6 mgm%	Parathyroidect 3½ glands	Ca-8 mgm%
4. P.T.	20	F	Lethargy Tiredness	Ca-10.9 mgm% PTH normal	Parathyroidect 1½ glands	Ca-11 mgm% Being reinvestigated PTH elevated
5. U.R.	61	F	Bone & muscle pains	Ca-13 mgm% PTH-elevated	Para. Adenoma	Ca-6 mgm%

tion pathological examination. If hyperplasia is confirmed all but half of one parathyroid gland is removed. Adequate surgical treatment will cause the serum calcium to fall to normal or below normal levels within 18 to 36 hours post-operatively. At times the temporary administration of calcium and vitamin D is necessary to control postoperative hypocalcemia.

Continued observation of "cured" patients is essential. There are occasional recurrences of hyperparathyroidism or unsuspected endocrine adenopathies.⁵ Many patients who have benefited initially from operation will progress to death from their preexisting renal disease. If demineralization was present before surgery there will be recalcification in most patients post-operatively.

MATERIALS AND METHODS

Since 1971 the SMA 12 autoanalyzer has been used in the laboratory service of the Flagstaff Hospital. The finding of elevated serum calcium prompted surgical treatment in 5 patients. The age, sex, clinical complaints, laboratory findings, surgical procedure and follow up have been tabulated. (Table 2)

Two parathyroid adenomas have been excised with no recurrence of the hypercalcemia. One patient had subtotal parathyroidectomy with good results. One patient had subtotal thyroidectomy and parathyroidectomy with normal calcemic response and no further urinary calculi formation. The fifth patient had an incomplete exploration after normal findings in the neck. Recurrence of the hypercalcemia occurred post-operatively. Reinvestigation with venous catheterization and hormone levels is being done.

While this is a small series of cases it presents a few of the problems that have been encountered when hypercalcemia has been more easily diagnosed in a small hospital.

SUMMARY

1. The surgical treatment of hypercalcemia hinges upon an accurate diagnosis before surgery. The hypercalcemia must be verified beyond doubt. The other causes of hypercalcemia must be ruled out. Parathyroid hormone hyperactivity must be documented by radioimmune assay of parathyroid hormone. Malignant tumors producing ectopic parathyroid hormone substances must be diagnosed or ruled out. Adequate radiological examinations should be done.

2. If the hypercalcemia is asymptomatic a period of observation of at least 6 months should precede surgery.

3. After the decision to explore the neck has been made the surgeon should be prepared to make a meticulous and thorough search for the lesion. Mediastinotomy if considered should be done as a second procedure.

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CHRONIC URTICARIA: A GUIDE TO ETIOLOGY

MICHAEL M. SCHREIBER, M.D.

Urticaria is a skin lesion of localized edema produced by a loss of fluid from the microvasculature into the dermis.

The sequence of events is: First, a clone of B lymphocytes elaborates a specific immunoglobulin, IgE, in response to the presence of an antigen. This IgE selectively attaches to the cell surface of the perivascular mast cells. Then the circulating antigen joins the IgE initiating secretion of histamine from the mast cells. This produces contraction of the post-capillary sphincter of smooth muscle creating capillary stasis, endothelial cell separation, and vascular leakage.

Chronic urticaria can be defined as attacks of hives, not necessarily consecutive, lasting longer than four to six months.

The patient's history may provide the basis of

etiology, and multiple causes must not be overlooked.

The pattern of the urticaria usually will give a clue as to the etiologic group in which the disorder falls, i.e. a varying pattern (seasons, day of week, circadian, time of day, place of occurrence, activity prior to or during occurrence) suggests an *exogenous* etiology; a constant pattern (cause within patient or constantly exposed) suggests an *endogenous* etiology.

Therapy for chronic urticaria follows two paths — first, non-specific *symptomatic relief* with systemic antihistamines, corticosteroids, ephedrine, or epinephrine; second, specific relief by finding and avoiding the offending antigen or antigens which may be simple but is more usually complex and frustrating for both physician and patient. The patient may even require hospitalization where a controlled environment is condu-

Reprint requests to: Associated Dermatologists, P.D., 5402 East Grant Rd., Bldg. F., Tucson, AZ 85712 (Dr. Schreiber).

cive to finding the antigen.^{1, 7}

The following outline is based on one by A. V. Zamm¹ and is elaborated upon.

A. EXOGENOUS SOURCES OF POTENTIAL URTICARIOGENIC AGENTS

1. INHALANTS:⁴

a) Pollens:

Seasonal—plants pollinating, plants brought into house

Perennial—plants in immediate environment (city, yard, home, etc.)

Tests—skin, nasal smear for eosinophils

RX (specific)—hyposensitization, removal of offending agents, electrostatic filters

b) Fungi:

Yeast—G.I. tract, vaginal, work in brewery or bakery

Tests—Oidomycin skin test

RX (specific)—Nystatin 500,000 units p.o., tid x 10 days

Mycelial—often during rainy season, moldy planters, brick walls, water cooler pads, moldy fomites, nurses mixing antibiotics, trichophyton infections

Tests—Trichophyton skin test

RX (specific)—removal of offending agents, hyposensitization

c) House dust:

Seasonal (use of air conditioning or heating plant), wool carpets, drapes, blankets, upholstered furniture, dirty air conditioning filters, mattresses, pillows, etc.

Tests—skin tests

RX (specific)—avoidance, hyposensitization, electrostatic filter, plastic covers (furniture, pillows, mattresses, etc.)

d) Animals:

Animals themselves, feathers, furs, stuffed furniture, rugs, glues, roaches in sewers and kitchen, mites in heating/cooling systems.

Tests—skin tests

RX (specific)—eliminate offending agents, hyposensitization

e) Plant products:

Orris root (cosmetics) pyrethrum (insect sprays); kapox, cotton seed, hemp (furniture); jute, wood dust (hobbies, new construction); karaya, tragacanth, carrageen (colostomy glue, denture glue); flour (bakers); flaxseed (poultices, wave sets, shampoos).

Tests—skin tests

RX (specific)—eliminate offending agents

f) Aerosols:

Chemicals, paints, solvents, epoxies, aerosol (cigarettes with glycine or frying fat), menthol (cigarettes), aldehydes (cigarette paper smoke), cosmetics, drugs.

Tests—skin tests, Basophil degranulation test

RX (specific)—avoidance of offending agent

2. INGESTANTS:

a) Food:

If constant, then persisting exposure.

Symptoms can persist days beyond single ingestions; reaction can be delayed 24-36 hours.

If allergic to one food in a family, may be allergic to others in same family.^{2, 3}

May be allergic to a food in one form but not another (raw/cooked).

May only be allergic to a food in combination with other factors (other foods, pollens in air, infection, sun exposure, etc.). Dosage may be a factor (amount each exposure or daily exposure necessary for a period of days).

Omnipresent foods may mimic an endogenous source (milk, wheat, corn, eggs, cottonseed, soybean, yeast).

Most common offenders — nuts, shellfish, fresh fruits, eggs, chocolate, pork.^{3, 4}

Tests—skin tests not reliable; diet (omission or commission) for 2 weeks. Once clear add 1 food each 5 days.

RX (specific)—avoid offending agent, sublingual hyposensitization with pure extract.

b) Drugs and chemicals:

Alone or mixed with foods as preservatives, antioxidants and artificial colors.

Allergic or histamine releasers (opium alkaloids, quinine, thiamine, pilocarpine).

Examples—fluoride (water), penicillin (milk products, blue cheese, drugs, preservatives), Sodium Benzoate or derivatives (margarine, cheese, jellies, soft drinks, relishes, cooking fats, salad dressings, candy, bottled juices, cherries, cider, lemon juice, cranberries), estrogens (capon, meat), antibiotics (meat, fowl), salicylates (fruits, artificial sweeteners, toothpaste, mouth washes), tartarazine yellow dye (candies, margarine, vitamin pills, soda pop, mayonnaise, drugs).

Tests—challenge dose (can be dangerous); skin tests

RX (specific)—avoid offending agents

3. INJECTANTS:

Vaccines, insulin, insect bites, blood transfusions, etc.

Tests—skin tests

RX (specific)—avoid offending agent.

4. CONTACTANTS:

Via percutaneous absorption (ear drops, eye drops, nose drops, douches, cosmetics, drugs, chemicals).

Tests—skin tests

RX (specific)—avoid offending agent.

5. PHYSICAL AGENTS:

a) Heat

1) Systemic (cholinergic)—

Small hives (1-3 mm diam.) with large

axon flare precipitated by exertion, emotions, increased body temperature; occasional systemic manifestations (diarrhea, cramps, salivation, syncope, headache)

Tests—mecholy skin test .1 cc I.D. of 1:5000 sol. (1 ampule + 125 cc saline) — positive is halo of erythema greater than 20 mm.

RX (specific)—cyproheptadine (Periactin)

2) Localized (non-cholinergic)—

Very rare, response only to localized heat

Tests—immerse hand in water at 38°C for 5 min., in 5 min. after withdrawal, a wheal limited to exposure site occurs.

RX (specific)—avoid heat

b) Light—

Varying degrees of sensitivity on various parts of the body (face and hands are 20 times less sensitive)

Tests—localized light exposure to all parts of visible spectrum plus ultra-violet plus infra-red

RX (specific)—sunscreens

c) Cold

1) Cryoglobulinemia

Symptoms only when serum concentration above 500 mg percent (greater than 25 mg % are abnormal); occur only in areas exposed to cold; may develop Raynaud's, ulcers, hemorrhages.

Seen in kalaazar, subacute bacterial endocarditis, multiple myeloma, chronic lymphatic leukemia, rheumatoid arthritis, liver disease.

Tests—venous blood at 37°C, let clot, draw off serum, cool to 50°C, cryoglobulins precipitate as white particles which redissolve when warmed to 37°C.

RX—symptomatic only

2) Syphilitic Paroxysmal Cold Hemoglobinuria—

In late or prenatal syphilis; urticaria may be symptomatic or latent (on ice contact)

Tests—laboratory for cold hemolysins (Donath-Lansteiner); serology

RX (specific)—antibiotics (penicillin)

3) Essential—

Congenital—on exposure to cold; non-sex linked Mendelian dominant; lasts for life.

Acquired—seen in reactions to horse serum, measles, scarlet fever, chicken pox, insect bites, jellyfish stings, eating certain foods, menthol lozenges, bacterial and parasitic infections, uterine fibroids, hypothyroidism, amoebiasis, cryofibrinogenemia (carcinoma, leukemia, collagen disease, pregnancy, myeloma, infections, Burger's Disease).

Tests—exposure to ice cube 20-30 seconds or to water at 6-10°C for 6-10 minutes (urticaria at site of exposure occurs); Serum cryofibrinogens

RX (specific)—avoid cold, find precipitating factor and treat.

d) Mechanical (dermographic)

1) Immediate—

Follows stroking of skin; is triple response of Lewis

2) Delayed—

Same as immediate subsiding in 20 min., reappearing in 3-8 hours, subsiding again in 24-48 hours. Occur at sites of pressure and trauma; often in those with superficial fungus infections and exposure to molds.

Tests—stroke skin

RX (specific)—Hydroxyzine; antifungals.

B. ENDOGENOUS SOURCES OF POTENTIAL URTICARIOGENIC AGENTS

1. Organisms:

a) Bacterial—

Can be normal flora as antigen; usually closed space infections (apical tooth abscess, sinuses, gallbladder)

Tests—X-rays, CBC, urinalysis, cultures

RX (specific)—trial of Tetracyclines x 5 days; hypsensitization

G.U.—Methenamine mandelate 1 gm. qid + ascorbic acid 1 gm qid for 5 days

G.I.—Succinylsulfathiazole .5 gm. qid x days.

b) Fungi—

Normal interdigital dermatophytes; tricho-

phyton infections; therapy with penicillin, streptomycin, tetracyclines; deep mycotic infection; normal G.I. or vaginal *Candida Albicans*

Tests—appropriate skin tests, KOH exam of skin scrapings, cultures

RX (specific)—avoid yeast containing foods, appropriate antifungals (Nystatin, Amphotericin, Griseofulvin, etc.)

c) Parasites—

Entamoeba Histolytica, *Giardia Lamblia*

Tests—stool exam (direct & concentrate)

RX (specific)—Diiodohydroxyquin .65 mg p.o. tid x 7 days

(G.U. tract)

Trichomonas vaginalis (G.U. tract)

Tests—microscopic of secretions

RX (specific)—Metronidazole 250 mg p.o. tid x 10 days

Worms—trichinosis, pinworms, strongyloides, ascariasis, hookworm, trichuriasis, cutaneous larva migrans

Tests—stool exam

RX (specific)—Thiabendazole

2. Miscellaneous Internal Conditions—

Liver and kidney disease, achlorhydria, neoplasms, autoimmune diseases, endocrine dysfunctions, infectious mononucleosis, post vaccination, acute necrotizing angitis, diabetes, carcinoma, undulant fever.

C. MISCELLANEOUS ETIOLOGIES

1. Psychogenic

2. Angioneurotic edema (Quincke's)—

Hereditary deficiency of C-1 esterase inhibitor

RX (specific)—testosterone, amodiaquine

3. Urticaria pigmentosa

Tests—urtication on stroking lesion, biopsy of lesion with specific stain for mast cells.

RX (specific)—symptomatic only.

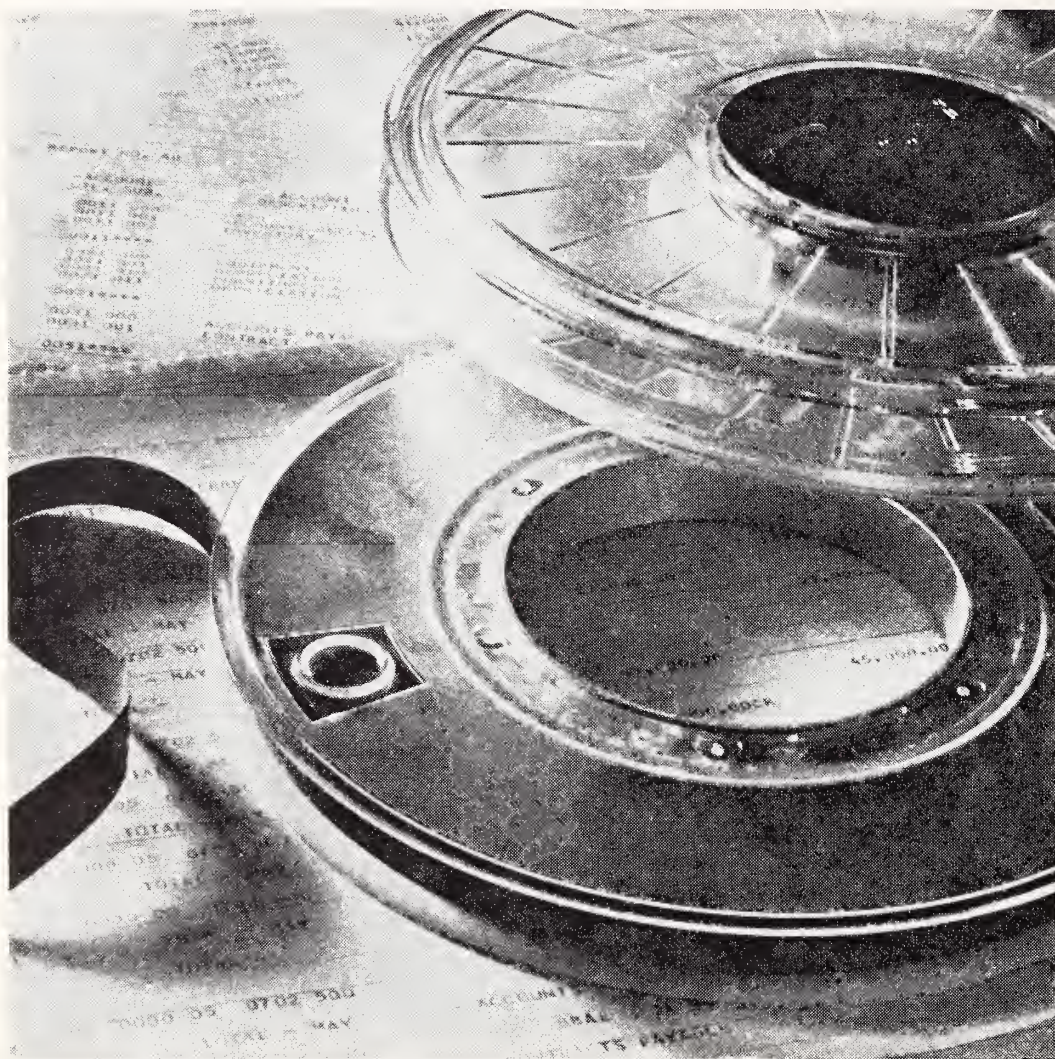
SUMMARY

It is hoped that the above outline will be of benefit, serving as a guide in finding the etiology of a most frustrating problem. One thing to keep in mind, however, is that in the majority of patients with chronic urticaria, multiple causative factors will be found if looked for diligently.

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MEDICINE, CHIROPRACTIC AND ACUPUNCTURE

It is the position of the medical profession (adopted by the AMA House of Delegates in 1966 and endorsed by the American College of Surgeons in 1974) that chiropractic is an unscientific cult whose practitioners lack the necessary training and background to diagnose and treat human disease. Thus, the ACS and AMA deem chiropractic to constitute a hazard to rational health care in the United States because of the substandard and unscientific education of its practitioners and their rigid adherence to an irrational unscientific approach to disease causation. Patients should entrust their health care only to those who have a broad scientific knowledge of diseases and ailments of all kinds, and who are capable of diagnosing and treating them with all the resources of modern medicine.

The American College of Surgeons in a recent statement point out the inconsistency of congressional support of PSRO law and chiropractic

services for Medicare and Medicaid recipients. The Department of Health, Education and Welfare has placed this limitation on chiropractic: "... there must be a malpositioning of a vertebra anatomically demonstrable on an x-ray film and that its objectivity should be such that anyone trained and experienced in the reading of x-rays could identify it."

And, while we voice concern regarding the problems that result from chiropractic, organized medicine must increase its own effectiveness in the delivery of health care, meeting changing needs, and still be wary of therapy of doubtful or no lasting value, such as acupuncture. It is time for the Board of Medical Examiners to review their acceptance of acupuncture as a mode of therapy. None of my patients referred for acupuncture therapy have had more than transient relief, — and at some cost.

John R. Green, M.D.



Editor's Page

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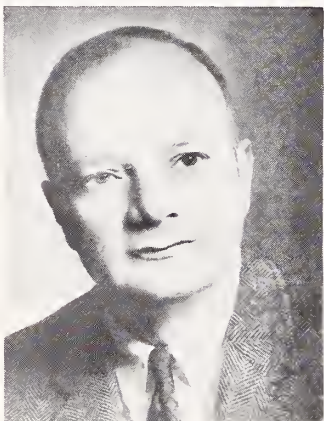
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Dean's Page

COLLEGE OF MEDICINE



NEAL A. VANSELOW, M.D.

As a newcomer to the State of Arizona and the University of Arizona College of Medicine, I am delighted to carry on the tradition started by Monte DuVal and Jack Layton by making this contribution to the DEAN'S PAGE of ARIZONA MEDICINE. It is my sincere hope that in the future, as in the past, the DEAN'S PAGE will serve as a vehicle of communication between the College of Medicine and its faculty and practitioners throughout the State.

When viewed from the perspective of a relative outsider, it is obvious that the College of Medicine has made great progress since its founding ten years ago. An outstanding faculty has been recruited, and a beautiful Medical Center, including a 300-bed University Hospital, has been built. Approximately 270 medical students, over 200 house officers and graduate students in the basic sciences, and numerous other health professionals are now receiving their education and training in the Arizona Medical Center and its affiliated hospitals. The College of Medicine has initiated major research programs in both basic science and clinical fields.

It is clear that the College of Medicine is out of its infancy and entering a phase of adolescence. While adolescence in medical schools as well as in humans may present certain problems, it can also be a source of great strength. During my few months as Dean, I have been greatly impressed with the enthusiasm and flexibility of the faculty and students and with the ability of the College to adapt to rapidly changing times.

The new three-year curriculum of the College of Medicine is one example of such adaptation. In 1972, the College converted its traditional four-year curriculum to one which can be completed in three years. Students retain the option to elect a four-year course of study. The long-term effects of a shortened undergraduate medical school experience remain unknown at the present time, but preliminary data indicates little difference between three-year and four-year students. An intensive evaluation of the new curriculum is under way and will continue as long as necessary, with the College retaining the option of returning to a more traditional program if it appears desirable.

One advantage of the three-year curriculum has been that it will permit the size of each entering class to increase. In 1975, the entering class will be increased from 71 to 80 students. In addition, the simultaneous graduation of the last of the four-year classes and the first of the three-year classes will permit the enrollment of up to 20 transfer students into the second year of the curriculum in the fall of 1975. Thereafter, there will be room for approximately 5 transfer students each year.

With the transition from infancy to adolescence, the priorities of the College of Medicine will necessarily change. During its first ten years, the College concentrated its efforts on internal matters—establishing its basic educational, research, and patient care programs and building the physical facilities necessary to support them.

Additional effort is needed in these areas. In particular, additional faculty are still needed in some departments and expanded research programs are needed in others. The College is now in a position to devote a greater percentage of its efforts to the external environment, however. A high priority item is the development of a coordinated program of continuing medical education for Arizona physicians. Efforts are now under way to recruit an assistant dean who will assume responsibility for such an "outreach" effort to help meet the educational needs of practicing physicians throughout the State.

It is my belief that a close working relationship with the Arizona Medical Association is essential if the College of Medicine is to achieve its goals and reach its full potential. The foundation of such a relationship has already been laid by my predecessors, Drs. DuVal and Layton. I pledge to continue to strengthen the bridges between practicing physicians and academic medicine which they have built and look forward to the opportunity to work with the Arizona Medical Association in the months and years ahead.

Neal A. Vanselow



Clinical Oncology In Arizona

This new section in Arizona Medicine is specifically targeted to the subject of cancer care in the state of Arizona. Recognition of the importance of cancer management has been underscored by the establishment of the conquest of cancer as a national goal. In this column, current concepts in cancer management and recent advances in cancer research that are relevant to Arizona, will be discussed each month. Cancer therapy is currently changing at an extraordinarily rapid rate, and the views expressed on this page should not be considered as static recommendations. The editors of this column will select key topics and invite interested physicians and allied health professionals from Arizona to write components related to areas of their expertise in cancer.

Editors: Paul H. Duffey, M.D., F.A.C.P., Hematology-Oncology, The Tucson Clinic, Tucson, Arizona 85716; Sydney E. Salmon, M.D. Professor and Head, Section of Hematology and Oncology, University of Arizona College of Medicine, Tucson, Arizona 85724; Robert H. Thoeny, M.D., Dir., Radiation Oncology, Good Samaritan Hospital, Phoenix, Arizona 85006.

CHRONIC LEUKEMIAS MYELOGENOUS

ROY S. WEINRACH, M.D., Ph.D., FACP

Etiology. The etiology of chronic myelogenous leukemia (CML) is not known. There is an increased incidence of chronic granulocytic leukemia in patients radiated for ankylosing spondy-

litis and in survivors following exposure to nuclear explosions. However, not more than 5% to 10% of those developing the disease have had a radiation exposure history. There is little evidence that viruses can be implicated in the human disease. The familial occurrence of chronic myelogenous leukemia is rare. It would appear that genetic factors do not play a major role in the induction of this disease. Clearly, other, as yet unknown, factors must be of importance in the genesis of this type of leukemia.

Clinical Aspects. Chronic myelogenous leukemia makes up approximately 20% of all cases of leukemia. There is a slight male predominance in the sex incidence of this disease. A large majority of patients are in the third to seventh decade, and the peak incidence may be shifting to a later average age.¹

Early symptoms of chronic myelogenous leukemia are malaise, fatigue, pallor, weight loss, sweating, and possibly low grade fever.

Skeletal discomfort may be a feature. Fullness in the upper abdomen as a result of hepatosplenomegaly is usually a later manifestation. Bleeding manifestations as a result of thrombocytopenia or qualitative defects of the platelets may be present. Infectious episodes early in the course of the disease are rare. Equally rare is for the diagnosis to be made by a routine blood count in an asymptomatic patient, as often happens in chronic lymphocytic leukemia.

The major physical signs include massive splenomegaly, skeletal tenderness particularly over the sternum, and signs of hypermetabolism such as warm moist skin and low grade temperature. There may be obvious pallor of the skin due to anemia. Hepatomegaly is usually mild to moderate. Lymphadenopathy is an uncommon manifestation of the typical form of the disease. A soft tissue mass outside of the reticulo-endothelial tissues is often the first sign of blastic transformation.

From: 1313 N. 2nd St., Phoenix, AZ 85004 (Dr. Weinrach).

Laboratory Aspects. Examination of the peripheral smear is usually sufficient to make the diagnosis. Myeloid elements in various stages of maturation are seen in the peripheral blood, ranging from the most mature granulocytes to the more undifferentiated blast forms. Eosinophilia and basophilia may be present. Initially, white blood cell counts of 100,000 to 300,000 may be seen.

Anemia may be absent initially but becomes more pronounced with progression of the disease. Approximately one-third of patients may have thrombocytosis initially but as the disease progresses to the later stages, thrombocytopenia is the rule.

A bone marrow aspirate will reveal a very hypercellular marrow with decreased adipose spaces and the myeloid-erythroid ratio can be as high as 50:1 rather than the normal values of 5:1. The marrow commonly extrudes from the aspirating syringe like toothpaste. Although the diagnosis of this entity is usually not difficult on the basis of the preceding considerations, at times the disease must be differentiated from leukemoid reactions, e.g., non-neoplastic elevations of white blood cell counts on the basis usually of other malignancies, tuberculosis, fungal or bacterial infections and drug reactions.

When this problem is encountered, the leukocyte alkaline phosphatase determination may be of value, for it is diminished or absent in this disease. It may be also decreased in paroxysmal nocturnal hemoglobinuria and other myeloproliferative disorders, but is usually elevated in infection, malignancy, polycythemia rubra vera and pregnancy.²

The Philadelphia chromosome is detected in the metaphase of dividing bone marrow cells in about 90% of CML cases and in some other hematologic disorders. The Philadelphia chromosome in a small acrocentric autosomal chromosome, a member of pair 21, and has shorter arms than the usual autosomal 21 paired chromosomes.

The serum B₁₂ level in chronic myelogenous

leukemia patients may be elevated.

Treatment. The objective of therapy is to reduce the leukemic mass of tissue. Formerly, splenic radiotherapy was the treatment of choice but the clear superiority of busulfan (Myleran, Burroughs-Wellcome), an alkylating agent of the sulfonic ester type, has recently been demonstrated, and it is the agent of choice to initiate therapy.³

Initially, 6-8 mg a day are given by mouth in the morning. The leukocyte count (WBC) may continue to rise during the first two to three weeks but then falls. Complete blood counts weekly are required during the phase of decreasing leukocytosis. When the leukocyte count is approximately one-half the original value, the dosage of busulfan is reduced. Usually after 4-6 weeks the WBC is below 15,000 and treatment can be stopped. At times, periods of 8-14 weeks may be required to achieve a near normal state.

There is still some controversy as to whether continued maintenance therapy or intermittent therapy in the initial phase of the disease is superior. Maintenance therapy, if used, can be as low as 2 mg weekly. However, maintenance therapy can cause severe anemia of sudden onset requiring transfusion therapy for many months. Steroids may reverse the marrow suppression but may also cause exacerbation of the CML. The WBC continues to fall after busulfan is discontinued, and prolonged marrow hypoplasia and thrombocytopenia may be produced in certain patients.

Toxic side effects include, in addition to myelosuppression, amenorrhea, skin pigmentation, germinal cell atrophy, fetal malformations, an Addisonian-like clinical picture and pulmonary fibrosis.⁴ The observation of these side effects is an indication to stop the drug.

Many agents have been used successfully by various authors in this disease. However, none to date has supplanted busulfan as the agent of choice to initiate therapy. Hydroxyurea currently

has some favor in treatment of cases refractory to busulfan.

Currently, there is a resurgence of consideration for splenectomy in the treatment of this disease, particularly in thrombocytopenic patients.⁵ Splenic radiotherapy may be of value to reduce massive splenomegaly in refractory cases, although as stated previously, it is inferior to Myleran for basic therapy of this disease.

Hyperuricemia may be treated with hydration and with the use of allopurinol. Prophylactic initial use of allopurinol will tend to prevent uric acid nephropathy and attacks of gout due to increased nucleoprotein turnover.

Because of the peak age incidence of this disease, pregnancy in association with chronic myelogenous leukemia is encountered. Chemotherapy of all types should be delayed as long as possible, when pregnancy is present, because of the obvious potential harm to the fetus. However, busulfan appears to be relatively well tolerated in pregnancy, and many cases of normal gestation have been described during busulfan therapy.

In perhaps as many as 70% to 80% of cases, no matter how successful the palliation of the disease has been in earlier stages, a blastic transformation occurs which resembles acute myelogenous leukemia. There is commonly a tumor mass present which on biopsy will be reported by the pathologist as reticulum cell sarcoma or histiocytic lymphoma but is actually a collection of leukemic cells. This phase is usually very refractory to therapy with short survival anticipated. Some success has been recorded with the use of daunorubicin, prednisone, cytosine arabinoside and other drugs used in acute leukemia treatment.

For chronic myelogenous leukemia the median duration of survival is approximately 3 to 3.5 years and this is essentially unchanged from the early description of this disease in 1924.⁶

LYMPHOCYTIC

MELVYN C. ROTHMAN, M.D.

Clinical Aspects. Chronic lymphocytic leukemia (CLL) can be described as a disease in which the number of lymphocytes in the peripheral blood is markedly increased accompanied by infiltration of the bone marrow and an increase in palpable lymphoid tissue. CLL is common in older people, rare in children, and unusual in young adults. The clinical spectrum of this disease is broad. In some patients at the time of diagnosis the disease can be described as benign, indolent, or inactive. There is a lymphocytosis, a variable amount of organ infiltration, but no symptoms. Usually there is no anemia or thrombocytopenia. The more aggressive form of the disease is characterized by a symptomatic patient, often with weight loss and fatigue, who has a progressive lymphocytosis. In these patients there is significant marrow dysfunction with anemia, thrombocytopenia, and granulocytopenia. Late in the disease acquired hypogammaglobulinemia can occur with increased susceptibility to bacterial infections.

Treatment. Alkylating agents are the mainstay of chemotherapy. Chlorambucil is the most popular and is recommended at a starting dose of 0.1 mg/kg — 0.2 mg/kg daily (usual total daily dose in the range of 6-12 mg per day). A fall in white count of 50% should be accompanied by a 50% reduction in the dose of Leukeran until a white count of between 10-25,000 is reached. At that time the Chlorambucil can be stopped to be restarted as needed to keep the white count in that range. Corticosteroids are useful in patients with poor response to Leukeran or for the autoimmune complications of the disease (Coombs positive hemolytic anemia and autoimmune thrombocytopenia). There is some data to suggest that Chlorambucil with chronic low-dose steroid therapy (10-20 mg of prednisone per day)

From: 3411 N. 5th Ave., Phoenix, AZ 85013 (Dr. Rothman).

is more effective in the control of CLL than Chlorambucil alone. For sick patients with prominent nodes, high-dose steroid therapy (40-60 mg of prednisone per day) will promptly improve the sense of well-being of these patients and often reduce the size of enlarged nodes, liver and spleen.

Radiation therapy can be employed to reduce the size of an enlarged spleen or enlarged nodes to relieve pain or obstructive symptoms. Whole body irradiation has been used by some investigators with dramatic reduction in the leukemic cell mass and a very high rate of complete remission. This modality of therapy can be used repeatedly as needed.

Kinetic studies have demonstrated that CLL results from the accumulation of slowly proliferating long-lived leukemia cells. This suggests that intermittent treatment regimens might be advantageous since normal marrow cells recover more rapidly than leukemia cells. Studies testing this hypothesis have been completed by the Southeastern Cancer Study Group using bi-weekly Chlorambucil. They concluded that bi-weekly administration of this drug is as effective as daily continuous administration, but with considerably less hematologic toxicity.

Splenectomy is indicated in those patients who have immune thrombocytopenia or Coombs positive hemolysis unresponsive to steroids. This procedure will not affect the course of the underlying leukemia process.

Bacterial infections are a serious risk in the hypogammaglobulinemic patient with CLL. Antibiotic prophylaxis is not generally recommended. However, monthly gamma globulin replacement should be tried in the patient with recurrent serious infections. Fever in a patient with CLL should not be considered "tumor fever". A vigorous search for an infectious cause of the elevated temperature is indicated, appropriate cultures should be obtained, and then therapy start-

ed with parenteral bactericidal antibiotics in adequate doses.

Prognosis. Response to therapy should be viewed in the context of the wide variability of clinical severity. Remission in CLL is felt by some to be a limited definition and goal. That is to say, improvement in performance, reduction in the size of nodes and organs, and improvement in hematologic parameters without return to normalcy are reasonable and attainable end points of treatment. It is traditionally felt that some patients with CLL probably require no therapy at all and others require aggressive chemotherapy. It is important to identify the patient with mild or early disease who may need nothing more than to be periodically examined and have blood counts. Median survival in this group is five years, and a third of them live 10 years.

Patients with unusual fatigue and a mild leukocytosis of 15-30,000 deserve a bone marrow biopsy to exclude lymphocytic lymphoma involving the marrow.

In summary, the therapy of CLL can be deceptively easy in the stable patient and discouragingly difficult in the patient with progressive disease. Multiple modalities of treatment are available and often necessary for the optimal care of patients with this challenging lymphoproliferative disorder.

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COLPOTOMY IS ALIVE AND WELL

WALTER B. CHERNY, M.D., C.M., FACOG

It still remains a source of disquietude that in this age of "medical enlightenment" physicians, and particularly those who practice the abdominopelvic surgical disciplines, cannot clearly distinguish among several important but patently different disorders of the female reproductive system until and unless the pelvic disease is viewed directly.

It is often impossible to differentiate acute salpingitis where treatment is non-surgical, from a chronic or even possibly an unruptured ectopic pregnancy where immediate surgical treatment is imperative. Similarly, unilateral torsion of the adnexa (surgical) and endometriosis (sometimes surgical, sometimes not) may add to the insoluble differential diagnosis.

A variety of sources of helpful information has been developed to aid the clinician in resolving the puzzle after an exhaustive history and detailed examination has been done. The presence or absence of fever, leucocytosis, elevated pulse rate, high sedimentation rate, pyuria, a unilateral adnexal mass, rebound tenderness, are considerations which may be helpful but are not conclusive. Similarly a "tobacco juice" uterine discharge, non-clotting blood on culdocentesis, Hegar's Sign, and a flat plate of the abdomen have strong support in some quarters. Yet though many or all may be considered, and test results evaluated, most patients who have lower abdominal pain and an adnexal mass usually go to the operating room to have the definitive diagnosis established by direct vision. This is even more likely if the history provides an indistinct, but possible episode of abnormal uterine bleeding.

The trip to the operating room is inevitable because the inadequacies of our "science" are such that to do otherwise may well, and unnecessarily, jeopardize our patient's life. But what of

the patients whose disease is not life threatening; who do not after diagnosis, need any additional remedial surgery? Beforehand, one cannot always determine the extent of necessary surgery that should be done.

Having decided to take a patient to the operating room, the physician next chooses the appropriate surgical technique that will provide the most information for the smallest initial tissue insult. Clearly this depends upon the physician's past experience, ability, and training. There are many competent gynecologists who are enthusiastic proponents of culdoscopy and pelvic laparoscopy for this purpose. Both techniques have enormous merit in providing visual scanning of the pelvic viscera. Neither method, however, affords the operator a chance of direct palpation, and each has specific hazards of which one needs to be mindful. Although there are a handful of residency training programs teaching the techniques, and courses are available for the physician in practice, most remain oversubscribed.

There is another procedure which ought not be overlooked. The operation of colpotomy is entirely suitable and quite adequate for purposes of pelvic exploration when the diagnosis is not clear. Though it can be done anteriorly (ventrally) gaining access to the pelvis between the bladder and the uterus, most operators prefer the posterior approach entering the pelvis through the cul-de-sac. The technique is familiar to all who operate per vaginam, and is one of the necessary steps in a vaginal hysterectomy. Exposure of the pelvic organs, even in the nulliparous, is generally not very difficult if one is reasonably adroit with conventional surgical instruments and has an assistant. Direct inspection and palpation of the uterus, tubes, ovaries, broad ligaments, bowel and cul-de-sac is possible. Once

From: Dept. of Obstetrics & Gynecology, Good Samaritan Hospital, Phoenix, AZ. (Dr. Cherny).

the diagnosis is made, additional surgery may not be necessary and simple closure in one layer is effected (two layers if there is preference to close the peritonum separately).

When additional surgery is deemed advisable it can be done immediately through the same vaginal incision much of the time. Enlarging the incision if necessary, even to detaching one or both uterosacral ligaments, is not difficult. They should be reattached, however, prior to closing the colpotomy.

Ovarian biopsy, resection or evacuation of ovarian cysts that measure up to 5 centimeters, wedge resection and excision of small benign ovarian neoplasms can be readily done. Cornual resection and salpingectomy, for ectopic pregnancy or other tubal disturbances, is not an uncommon procedure in some clinics that often use the colpotomy for diagnosis. Very few need be reminded that pelvic abscesses involving the cul-de-sac are always drained through a colpotomy incision.

The advantages of this technique are many. Patients generally have less post operative pain than those with abdominal incisions. They are ambulatory earlier, generally have shorter hospital stays, and are spared a readily visible scar. Morbidity rates vary depending on the nature of the primary disease in the pelvis, but are customarily quite comparable to similar procedures done from above.

Obviously, the colpotomy, by its nature, can be neither a routine nor a substitute incision for all pelvic surgery. Where neoplasms are large, or resection needs to be extensive, where scarring, adhesions, or other fibrosis limits visceral mobility, the vaginal incision should not be used. There are contraindications just as with any other surgical procedure.

Some gynecologists, not accustomed to this diagnostic method of exploration or surgical

therapy may find it slightly awkward at first. But soon it becomes apparent that the territory is familiar, and no new or dangerous maneuvers are necessary for adequate completion of the operation. The surgeon's confidence is strengthened.

Though some critics in the past have scornfully condemned this approach, particularly in its treatment of ectopic pregnancy, as requiring "surgical calisthenics" or "surgical stunts", such is not the case. Everyone realizes these have no place in the care of the patients. But it shall be again, as it has been in the past, a veritable life saver someday for a competent gynecological surgeon, who is able to arrest hemorrhage quickly in an obese patient in shock with a ruptured ectopic pregnancy, by entering the pelvis through the vagina where there is no fat, instead of having to incise a large panniculus with the attendant difficult sequelae.

Actually, the management in this fashion of some patients with tubal pregnancy is quite acceptable. A few reports indicate success with more than 35% of such patients. Perhaps this should be discussed in a future page dealing particularly with eccyesis.

One final thought seems fitting. There should be no sense of shame, or embarrassment, or failure felt by the operator who determines by diagnostic colpotomy that additional surgery is necessary and will be so extensive as to require an abdominal incision, then proceeds to do it in that fashion. It makes no more sense to argue in this instance that a ventral celiotomy should have been done in the first place, than it does in a subsequent patient who does have such a celiotomy, but in whom it is realized that quite adequate therapy could have been carried out had a colpotomy incision been used instead.

To quote La Rochefoucauld:

"Everyone complains of the badness of his memory, but nobody of his judgement".



Editorial

ANARCHIST



WILLIAM B. McGRATH, M.D.

To lie is to deny the truth to someone who has a right to it. Note, please, that this is an equation. Ordinarily when a lie is told the liar is at fault. But at least equally wrong may be the one who asked for a "truth" which would prove too costly and unfair.

There are many occupations and services in which minor fraudulence is practically constant: the padding of the bill, the alleged repairs or replacements. The claim is that some short-cuts and misrepresentations are necessary in competition or for profit. The businessman or employee who convinces himself that he has to be a little dishonest in most of his dealings will pay a price in nervousness or psychosomatic disorder. But this is not meant to be a sermon on honesty.

Our more pressing concern is with the latter half of the equation: Who has a right to the truth? This is a really threatening question. It involves not only our dignity and independence but also our ultimate integrity.

On the table over there are stacks of forms and questionnaires and interrogatories relating to patients. Return envelopes are addressed to everything from drivers' license bureaus to insurance companies to federal agencies. Many of the inquiries almost coerce us to use rationalizations or half truths or downright dishonesty—unless we keep in mind a clear concept of the definition and exclusionary borders of honesty.

To some of the questions it would be tempting to reply "not relevant" or "semantically unanswerable" or "none of your g. d. business." But our satisfaction or the courage of our convictions would be at the patient's expense. He would be the one to be penalized.

Some years ago a friend of mine recognized a potential drinking problem and he went on the wagon. Affluent now, he wants to indulge a lifelong wish to fly his own plane. On filling out a federal aviation administration application, he checked "yes" to some question about

his earlier use of alcohol or whether he had ever had psychiatric attention. Oh, my! He has as a result been badgered and harassed from every self-important level of that agency, and so have I in his behalf. Now they are demanding a battery of psychological tests, electroencephalograms, liver function studies and so forth. My original report to them was clear and entirely candid. But with the insulting anonymity of bureaucracy they would not simply take my word for anything.

More than half the individuals who consult us do not have a classifiable psychiatric illness, and this is probably true of at least a third of our private hospital population. But woe-betide these people (and us) when they apply for insurance or any kind of licensure. The tone of requests for further information is half obsequious and half accusatory so that we find ourselves on the defensive.

Only a patient can release privilege. This is as it should be. But when he has done so, then your records become subject to subpoena. It seems to me that you should have some say-so in this matter, some right or privilege to lock up your files or expose them. In the first place there is no law that you have to keep records. Secondly, your records are, in effect, letters to yourself — not to the patient and not to anyone else. Similarly your consultation report to a referring physician is a personal letter to him. Without your express authorization it would be unethical of him to show such a letter to anyone else, even the patient.

When, for example, a child custody battle is impending, you are almost forced to keep a double set of records — and such would vitiate your reporting and go entirely against your principles. It is easy to suggest some slantings or euphemisms or selective omissions, but this

would become the quicksand of integrity. These are problems of which no satisfactory solution has come to our attention.

A comparable issue arises when a third party capriciously disallows your legitimate charges. If the only way to break even or to get fair treatment will be to pad or partly falsify your billing, then the system is badly awry.

There is an addendum to this polemic or truthfulness and it is much more important than space or our small illustrations might convey. A person who has a right to the truth does not have a further right to an explanation of the truth. We might invite you to join us for lunch. Or we might ask whether you can fit a new patient into your day's schedule. You owe us a truthful answer, yes or no. But most emphatically you do *not* owe us explanation or justification of your answer. If we respect you, we have to assume that you had a good or compelling reason for saying yes or no. Out of courtesy (or bad habit) you might offer excuses or explanations. But are you not thereby opening the door to argument? And if we are the kind of aggressive people who do not graciously take "no" for an answer, then you will be forced to choose between increasingly rude insistence on your answer or you will capitulate and grudgingly reverse your decision.

Within reasonable limits, of course, application of this rule is helpful in dealing with young people (or immature adults). If your son asks to borrow my car I will say "no". If he demands, "Why not?" I'll probably reply that if he can't figure out the reason for my refusal he isn't smart enough to have asked in the first place. This sounds like a put-down. Still, young people are always needing and requesting opportunities to think for themselves. Whenever we usurp and verbalize their thinking for them we take

away these opportunities. (Friends say that my epitaph will be the single word, no).

To lie is to deny the truth to someone who has a right to it. At every level, organized medicine is beginning to arrogate a number of rights which belong only to the private physician. It is an invasion armed with sanctions and rationalized by the usual fallacy: the end justifies the means. Discipline the entire group because of a few delinquents.

Unless there are some grounds on which to bring your competency into question, no one has any right to question it. This is the old, revered American principle of presumed innocence.

No-one knows the dimensions or demands of your practice, and no-one is privy to that information. No-one can make out the budget for your needed rest and recreation. No-one has the arrogant authority to dictate or apportion how, when and where you will keep abreast of knowledge in medicine or in your specialty. No-one has the prerogative to add one hour to your professional and scholastic labors or to subtract one hour from your relaxation and your life expectancy. Taking care of a practice is burden enough, and a person cannot do his job with someone, uninvited, breathing down his neck!

Your work speaks for itself and your reputation is among colleagues who are close to you. In a real world with adult orientation there is no such reification, no such "thing" as a committee or a board. There are only persons. Ten individuals, under whatever honorific title, are not suddenly ten times more intelligent than you or better qualified than you to manage your professional life. Quantity adds not one cubit to quality. You are as tall as the whole American Mother Knows Best Medical Association.

It is infuriating to witness a number of grown

men signing the roster of attendance at a meeting and then sheepishly hurrying away. They should never be obliged to play such kindergarten games. How, pray God, have they let themselves be put in a position in which, through no fault of their own, they must either cheat or make excuses or become aggressive or ingratiating or, like children, have to worry about some penalty for disobedience?

The concept of certification has always been abhorrent to me. Who certified the certifiers? It is like a loyalty oath. I'd be glad to take one — but I have never given any individual or authority the right to require me to. Every other trade or profession has had sense enough to avoid the pitfalls of any certification (except honorary) beyond licensure. If a lawyer wants to specialize in one or another area he simply does so, qualifying himself and establishing his reputation.

Someone will argue, of course, that the majority rules. And some salaried (nine to five) friend will pat us on the head, placating and forgiving, and ask why we didn't attend more meetings and make our opinion clear. Point number one: we do not owe it to anyone to sacrifice another evening in order to defend our opinion or our position. There is no-one to whom we have to prove or proclaim our right to mind our own business. Point number two: let the majority rule the majority. But keep in mind that the majority's right to impose any rule on a minority is by no means absolute. It is very strictly limited.

A proctologist might find an appropriate place for most of the by-laws and rules and regulations which are offensive to any reasonably mature and functioning professional.

Like Luther, I will nail this proclamation to the door of the establishment: I HAVE NO BOSS AND I AM TIRED OF HAVING TO SAY SO.



*Department of
Health Services*

A SOLICITATION FOR REFERRAL OF YOUR PATIENTS



JAMES L. SCHAMADAN, M.D.

We Americans have not evolved to the point of getting along without the motor vehicle. It moves people and products from one corner of the nation to another and has been a major influence on the growth of our State. The number of registered motor vehicles in Arizona (1,740,500) has almost equalled the population, causing great concern among environmentalists over the impact of the automobile on the quality of the air we breathe.

Sources of air pollution from the automobile include the crankcase, exhaust outlet pipe, the carburetor and the fuel tank which emit carbon monoxide (CO), hydrocarbons (HC), oxides of nitrogen (NO_x), and particulate matter into the air. The Arizona emission standard for CO is 3.0-4.0 percent for cars model year 1968 and later, 4.5-5.0 per cent for cars model year 1963-1967, and 5.0-6.0 per cent for cars model year 1962 and older. The standard for hydrocarbons is 300-400 parts per million for cars model year 1968 and later, 500-600 parts per million for cars model year 1963-1967, and 600-800 parts per million for cars model year 1962 and older. Standards vary according to the size of the vehicle's engine. In Phoenix and Tucson the automobile contributes 98 percent of the carbon monoxide and 65 percent of the hydrocarbons found in the air. If all the automobiles met the Arizona emission standards for carbon monoxide, we would reduce the amount of CO in the atmosphere by 25 percent.

Cars may fail to meet the standards because of a dirty air cleaner, a plugged positive crankcase ventilation valve, a malfunctioning carburetor, fouled spark plugs or defective distributor. Recent tests conducted by our Department's

Emissions Laboratory have shown that automobiles maintained to the manufacturer's tune-up specifications give better fuel economy and cause less pollution. Cars tuned to match the lowest emissions standards can improve gas mileage 10-36 percent.

Environmental health is a major concern of the Department of Health Services. Pollution from the motor vehicle is important because it affects our health, reduces visibility, impairs growth of vegetation and attacks many materials including rubber, textiles and dyes. Air pollution emitted into the atmosphere by motor vehicles can be successfully reduced with a proper inspection and control system, unleaded gasoline when required for use with a catalytic converter, and more efficient air pollution control devices. The overall goal of our vehicular emissions control program is to improve and maintain the State's air quality for the health and benefit of all citizens.

Your patients' cars (and yours too!) can be checked for the amount of carbon monoxide and hydrocarbons they emit through their exhaust system. The test can be performed and the emissions checked against Arizona standards at one of two vehicular emission inspection stations operated by the Bureau of Air Pollution Control of the Department of Health Services. The stations are located at 600 North 40th Street, in Phoenix, and 4040 East 29th Street, in Tucson. Both are open to the public from 8-5 p.m. Monday through Friday with no appointment necessary.

Cars, trucks and motorcycles are all tested. Privately owned vehicles will be tested free of

charge, with no penalties imposed for failure to meet standards. In addition, minor adjustments that will bring vehicles up to standards will be done without cost to the motor vehicle owner. The inspection test will determine if there has been tampering with the emission controls and if the PCV valve is operating correctly. Finally, the car will be placed on a dynamometer where emission readings for HC and CO are taken at 50 mph, 30 mph and idle speed.

At the present time, the inspection stations regularly test motor vehicle fleets owned by public agencies and private cars requesting the service. A mobile can can be dispatched to rural areas for testing public vehicles on location.

After January, 1976, all vehicles in Maricopa and Pima Counties less than 15 years old will be required by State Law, House Bill #2319, to meet Arizona emission standards before license plates will be issued. Each car must receive an inspection test at one of the many privately operated (but State supervised) inspection stations to be established throughout the State. The cost of the inspection will not exceed \$5.00. If the vehicle fails to meet the standards, the owner will be given 30 days to have the car repaired and will be given one free inspection. Any additional inspections will be at the owner's expense.

Our experience to date in testing private vehicles indicates that about 30 percent will fail their initial inspection. As a preventive measure why not refer some of your patients to us now? We operate without additional paper work, committee structure, meetings, PSRO's or administrators . . . and our laboratories are available to you and your patients, without charge, as a service of this Department.



Topics Of Current Medical Interest

MALPRACTICE IN ARIZONA—A LOOK AT ONE ASPECT

As part of your Association's ongoing malpractice loss prevention program, we have put together a list of descriptive comments on reported malpractice incidents since January 1973. Not all "incidents" result in malpractice claims, suits or settlements. Of the 125 incidents filed, 42 were determined to have malpractice exposure, 59 were determined not to have malpractice exposure and in 25 cases the medical consultants had question about whether there was malpractice exposure.

The following descriptive comments are to give you an idea of the type of things that have happened in Arizona since January 1973. They may be of help to you by giving insight into the growing problem here in Arizona.

COMMENTS

Stillborn — poor obstetrical care. Also, maternal death.

Questionable type of treatment for obesity. Patient recovered.

Total loss of vision in one eye following sinus surgery. Question of informed consent and real need for surgery.

Failure to admit child with U.R. Dead on arrival following morning.

Medication prescribed despite known allergy. Gastric hemorrhage resulted but with complete recovery.

Severe tear into rectum during delivery.

Phone order by M.D. for depressant drug in already depressed addict in county jail.

Two upper front teeth in 10 year old girl broken.

Anesthetist state patient alright after surgery.

Improper prescription for Pyrilgin.

Emergency room care — failure to detect $\frac{3}{4}$ inch nail in base of thumb.

Poor care of puncture wound in undiagnosed diabetic.

Complication in hysterectomy case and subsequent inadequate surgery.

Failure to properly diagnose P.I.D. — G. C.

Hospital fall — disturbed patient not properly watched. Burn — severe.

Office care appears adequate despite a dead on arrival on following day.

Inadequate saphenous vein surgery.

Complication — hematoma — for femoral antio-gram.

Failure to diagnose meningitis.

Vasectomy — only one sperm count done post-op.

Sponge in abdomen

C.V.A. 2nd to cardiac catheter — question of informed consent.

Surgical complication, pyloroplasty.

Possible failure to recognize ulnar nerve injury and properly treat.

Alleged fracture of sternum 2nd to P.T.

Spinal cord injury.

Damage to 11th nerve during biopsy.

I.U.D. case — failure to instruct.

Suicide — exposure for hospital and psychiatrist.

Unacceptable surgical judgment in the face of multiple cardiac arrest.

Fall in x-ray department.

Inadequate treatment of bleeding 2nd to Coumadin.

Foreign body in Brain.

Inadequate treatment of fracture of the tibia with foot drop.

Premature hospital discharge Fatal M.I.

Inappropriate treatment of K. deficiency. Fatal.

Error in medication.

Inadequate treatment of cancer of uterus.

Failure to diagnose Trichinosis — fatal.

Perforation of esophagus.

Iliac artery injury during disc surgery.

Improper care by x-ray technician.

Complication from I.M. injection.

Inadequate treatment of spray gun injury.

Overt treatment with probable drug addiction.

Cardiac arrest 2nd to unacceptable anesthesia.

Penicillin reaction, also history of allergy.

Cosmetic eye surgery.

Mandibular surgery with fibrous union.

F.T.D. Choria carcinoma, failure to diagnose.

AMERICAN ASSOCIATION OF MEDICAL ASSISTANTS, STATE OF ARIZONA,
MARICOPA CHAPTER

DEAR DOCTOR:

The Maricopa Medical Assistants are offering educational sessions throughout the afternoon of October 19, 1974, at the Westward Ho Hotel, on all major insurances. There will be rotating sessions and your Medical Assistant may attend all or any part of these sessions.

PRESENTS: INSURANCE SYMPOSIUM OCTOBER 19, 1974
PLACE: CORRAL ROOM – WESTWARD HO HOTEL (parking available behind hotel on 1st avenue)
TIME: LUNCH SERVED FROM 12:15 P.M. to 12:45 P.M.
SESSIONS WILL RUN UNTIL 4:30 P.M.

INSURANCE PROBLEMS ????? THIS IS YOUR CHANCE TO GET THEM SOLVED.
CLAIMS EXPERT WILL BE PRESENT FROM THE BLUE CROSS, CHAMPUS, FEDERAL EMPLOYEES, STATE COMPENSATION FUND, C.N.A., INDUSTRIAL INDEMNITY, GALBRAITH & GREEN, CONNECTICUT GENERAL, METROPOLITAN (GE & HONEYWELL), TRAVELERS, AETNA, MEDICARE, MARICOPA FOUNDATION, MOTOROLA, LIBERTY MUTUAL. THESE REPRESENTATIVES WILL PRESENT INFORMATION ON CLAIMS HANDLING AND WILL ANSWER YOUR QUESTIONS.

EACH GROUP LISTED BELOW WILL BE IN THEIR OWN ROOMS AND YOU WILL ROTATE FROM ONE SESSION TO THE OTHER. THIS WILL ENABLE YOU TO ATTEND ALL OR ANY PART OF THESE SESSIONS SUBJECT TO YOUR CHOICE AND SPACE AVAILABLE AT THOSE CHOICE TIMES – SO GET YOUR RESERVATIONS IN EARLY –. REGISTRATION FEE FOR THE ENTIRE AFTERNOON INCLUDING LUNCH IS \$10.00, AM MEMBERS – & \$12.00 NON-MEMBERS.

RESERVATIONS MUST BE IN BY OCTOBER 12, 1974

FOR FURTHER INFORMATION PLEASE CALL:

PAULINE VANRYN 264-3503, DAYS 249-4073, EVENINGS.

CAROL GARCIA 267-0192, EVENINGS.

NORMA TAYLOR 944-4215, EVENINGS.

MAIL RESERVATIONS TO: PAULINE VANRYN, 2012 W. CLAREMONT, PHOENIX, ARIZ. 85015

Please detach below and mail with your check:

NAME:	Indicate your preference in numerical order.
ADDRESS:	.. BLUE SHIELD, CHAMPUS FEDERAL EMPLOYEES
HOME PHONE:	.. MEDICARE
EMPLOYER:	.. INDUSTRIAL CARRIERS
AAMA MEMBER: Registration \$10.00	.. MARICOPA FOUNDATION, MOTOROLA
NON-MEMBER: Registration \$12.00	.. MISCELLANEOUS CARRIERS
AMOUNT ENCLOSED:	MAIL TO:
PLEASE MAKE CHECKS PAYABLE TO AAMA, MARICOPA CHAPTER.	PAULINE VANRYN 2012 W. CLAREMONT PHOENIX, ARIZONA 85015

ARIZONA MENTAL HEALTH IN TERRITORIAL DAYS

PART I

EDITOR'S NOTE: The following factual historical review of the beginnings of mental health in Territorial days is the first definitive account that we have found. We are indebted to the Palo Verde Foundation for Mental Health, Tucson for permission to reproduce their legislative history. John W. Kennedy, M.D.

THE FIRST FEW ASSEMBLIES IN 1864, 1865, 1866, and 1867 made no recognition of any problems of mental illness in the Territory.

Message for Gov. Richard G. McCormick

"Let it here be determined that social progress shall keep pace with material prosperity, and that as rapidly as possible institutions which are the strength and glory of the States and older Territories, shall be established and maintained."

FIRST THE PROBLEM OF MENTAL ILLNESS had become too obvious to be ignored. This is some 30 years after Dorothea Dix's famous memorial to the legislature of Mass.

Message for Gov. A. P. K. Safford

"No provision has been made for the care and maintenance of this unfortunate class of our people, and speedy action should be had in their behalf. It will probably be some time before the Territory will be in a condition to incur the expense of erecting buildings suitable for an asylum; and, knowing that the State of Nevada had contracted with California for the care of her insane, I addressed a letter to the Governor of California inquiring upon what terms the insane were received from Nevada and also if similar arrangements could be effected for the care of those of Arizona. The Governor in reply informed me that he was not advised of the particulars, but had addressed a letter to the Superintendent at Stockton, asking him to forward

me the desired information at as early as day as possible. As soon as I received the information I will lay it before you."

FIRST OFFICIAL RECOGNITION OF THE state's obligation for the care of the sick, came during this legislative assembly as a result of Gov. Safford's plea.

1873 — 7th ASSEMBLY

Message from Gov. A. P. K. Safford:

"I again call your attention to the insane of this Territory. Under the present statute, the care and maintenance of this unfortunate class of our people are left to the boards of supervisors of the several counties, and the only place available for their safe keeping is a common felon's cell. Such confinement is against the dictates of humanity, and the treatment is not calculated to restore to reason the poor lunatic; besides, the shrieks of the insane often become almost intolerable to all within hearing of them. The evil became so annoying that I addressed a letter to Governor Booth, of California, by the Hon. C. A. Tweed, upon the subject, and chiefly through Judge Tweed's exertions and influence, an arrangement was effected for the reception of a limited number of lunatics from this Territory at Stockton. This arrangement was only temporary, and does not meet the public necessities in this respect. A practical system should be adopted at this session for the care and maintenance of the insane, at the expense of the Territory."

GOV. SAFFORD AGAIN SHOWED REMARKABLE insight in preconceiving the idea of the advantages of caring for the patient in his own community.

1875 — 8th Assembly

Message from Gov. A. P. K. Safford:

"The last Legislature passed a law authorizing me to enter into contract for the maintenance of the insane, with such parties as I might deem advisable outside of the Territory. In pursuance of said duty, I entered into contract with Drs. Langdon & Clark of Stockton, Cal., for the care of such insane as might be sent from this Territory, at a cost of \$10 each per week, in gold. But two patients have thus far been sent; one of whom has died, and the other sufficiently recovered his reason to be discharged. So far as I have been able to ascertain, Drs. Langdon & Clark have faithfully performed their duty; but if arrangements can be made whereby the insane can be properly cared for within the Territory, it would save considerable expense in carrying them to California, and would doubtless be better for the unfortunates. The total cost for patients at the Asylum has been \$998.86."

GOVERNOR SAFFORD, KNOWN AS THE father of the public school system in Arizona, seems to have lost hope in establishing a treatment facility in the Territory as only two patients were being cared for.

1877 — 9th Assembly

Message for Gov. A. P. K. Safford:

"Under a contract made by me, in behalf of the Territory, with Drs. Langdon and Clark, of Stockton, California, the insane of the Territory are maintained and cared for. There are at the present time but two patients in the asylum. The total expense for their maintenance to June 30, 1876, was \$468.75. In a report me, dated October 29, 1876, the physicians in charge give but little encouragement of the restoration to reason of either of the patients. Under all the circumstances, the contract we have with Messrs. Langdon and Clark, is probably the most economical and humane plan that can be adopted for maintaining our insane, but, as the asylum

is located so far away, I would suggest the propriety of authorizing the Governor to appoint some competent person, living at Stockton, to visit the asylum at least quarterly, to examine and report the condition of the patients, their treatment, etc. While I believe that these physicians have faithfully performed their duty to the patients who have been intrusted to their care, still it seems but justice to these unfortunate people that a disinterested individual shall visit them at least once in three months.

1879 — 10th Assembly

1881 — 11th Assembly

Governor John C. Fremont and his assemblies took no notice of the problem of mental illness.

1883 — 12th Assembly BY THIS DATE THE POPULATION OF THE TERRITORY had increased to approx. 83,000 from 42,000 in 1880.

Message from Gov. F. A. Tritle:

. . . (Asylum at Stockton) The grounds consist of forty acres, a part of which is used to grow all kinds of vegetables for their use. Fresh vegetables go daily from the garden to the kitchen, and this, too, throughout the year. Recreation grounds are ample and have all conveniences. Baths with hot and cold water are at convenient places in the buildings, and there is abundant ventilation in all parts. The beds are kept clean and comfortably furnished. Every part of the building is kept perfectly clean, and nothing seems wanting for the comfort and health of the patients. The climate is equable; water good and plentiful, and all surroundings unexceptionable. I would respectfully suggest that as the number of our insane is so small, thirty-seven, that it would be an exceedingly expensive matter per capita for our territory to provide an asylum and care for their patients at this time, and that our contract be renewed by Dr. Asa Clark for the next two years.

It is made the duty of your executive by act of the legislature, to appoint some person residing at Stockton, to visit the insane patients of the Territory at least once in three months, and report their condition. For this, the sum of \$40.00

per annum is appropriated, I have been unable to employ any person for such salary, and suggest an increase of sum to \$100.00 per annum, or the act repealed.

THE NUMBER OF PATIENTS HAD GROWN CONSIDERABLY IN these two years and the prognosis was gloomy. Dr. Ainsworth was also President of the Legislative Council in 1885. And obviously thought little of the treatment program at the Pacific Asylum.

... 'Dr. F. K. Ainsworth:
"My dear Sir — If possible, I desire that you visit the Private Insane Asylum of Dr. Asa Clark, at Stockton, and ascertain, by personal observation and examination as fully as your time will permit, the physical and mental condition of the patients under Dr. Clark's care from the Territory of Arizona — with a view of reporting the result of your investigation for my information.
F. A. Tritle, Governor."

"And I respectfully report that in compliance with the above, on October 25, 1884, I visited the Pacific Asylum of Stockton, the designated Asylum for the insane of Arizona, and as thoroughly acquainted myself with the sanitary arrangements of an asylum in one inspection, and approximately ascertain the physical condition of a patient at one visit, it is nearly impossible, in many cases, to reach an accurate diagnosis of his mental condition, or give a prognosis of much value. For this reason I have depended largely upon the statements of Dr. Clark in assigning the patients to their respective classes.

A careful inspection of the Asylum and its surroundings clearly demonstrated that there is little to be desired in the line of sanitary improvements. There are a present few, if any inmates, other than those from this Territory and consequently no overcrowding of wards as is but too frequently the case in such institutions. The general diet of the patients is far better than that I have known to be furnished in several State Asylums, and I am assured by Dr. Clark that a special diet is always ordered for

any individual case requiring it.
At the date of my visit there were fifty-eight (58) patients from the Territory of Arizona. The several counties were represented as follows.

County	No. of Patients
Apache	1
Cochise	9
Gila	3
Graham	0
Maricopa	13
Mohave	4
Pima	10
Pinal	5
Yavapai	8
Yuma	5
Total	58

For convenience I have classified the patients under four general heads: Dementia, Mania, Melancholia, and Paresis, and find them represented as follows: Melancholia 1; Dementia, 21; Mania, 34; Paresis, 2. Total, 58.

I regret that I am not able to state the Dr. Clark's asylum supplies an exception to the almost universal rule, that asylums for the insane furnish only more or less complete means of restraining them from doing injury to themselves, and the persons and property of others; while the nobler department of the science of medicine, aiming at the ultimate recovery and restoration to physical and mental health of these unfortunate human beings, receives by indifferent attention. If our insane are to be sent out of the Territory to an asylum so remote that they may never be visited by relatives and friends, I am of the opinion that it will not be possible to do better than to send them to the Pacific Asylum. Respectfully submitted.

Your obedient Servant,
F. K. Ainsworth, M.D.
Prescott, Arizona, October 8, 1884

DURING THIS ASSEMBLY THE LEGISLATURE PASSED THE BILL which established the State Hospital, even though Governor Tritle did not ask for it.



Letters to Editor

Dear Editor:

Like so many midwesterners who like to play tennis the year round, I am moving to Phoenix (in September).

Started the AZ. Medicine subscription, and glad that I did. The June issue is delightful (I should know, I was editor of Clinical Medicine for 10 years — even though it was only a little journal with 10,000 subscribers, I got some idea of your problems).

As a physician who has been interested in pain syndromes for 20 years, I am not inclined to agree with Warren Gorman. Would you be interested in a fact filled review of cases personally

seen here, in pain clinics around the world and seen in two months with the Acupuncture Research Clinic, Dept. of Anesthesia, UCLA School of Medicine, last winter? All lawyers and many doctors have his opinion.

The Squaw Peak Notes were fun to read. I presume Dry Gulch Jake is a misnomer for a poor, downtrodden Arizona physician. Dr. Collings is to be congratulated on recognizing a case of leprosy.

Informed consent is well done.

Sincerely,

R. L. Gorrell, M. D.



ArMA Reports

THE MINUTES APPEARING IN THIS SECTION HAVE BEEN EDITED TO CONSERVE SPACE. A COMPLETE COPY OF THE MINUTES OF ANY MEETING WILL BE MAILED TO ANY MEMBER REQUESTING THEM.

MEDICAL EDUCATION COMMITTEE

Meeting of the Medical Education Committee of the Arizona Medical Association, Inc., held at 810 West Bethany Home Road, Phoenix, Arizona on Tuesday August 6, 1974, convened at 7:38 p.m., Robert E. T. Stark, M.D., Chairman presiding.

MINUTES

The minutes of meeting held April 11, 1974 were approved as distributed.

ARIZONA REGIONAL MEDICAL PROGRAM / CESA

The Board of Directors during meeting held June 15, 1974 referred to the Medical Education Committee a request from ARMP for financial help in sponsoring a series of programs or with in-kind support such as office space. Letter dated August 6, 1974 was received from John T. Condon, Ed.D., Associate Director, CESA, informing us that on June 30, 1974 the ARMP/CESA project terminated. The CESA objectives and functions have been taken over by the office of the Vice President for Health Services, University of Arizona and a proposed grant has been submitted to Washington, D.C. for funding from September 1, 1974 through June 30, 1974. Received for information.

NAVAJO HEALTH AUTHORITY MEDICAL SCHOOL

At the suggestion of the Scientific Assembly Committee correspondence with Laurence B. Callan, Ph.D., Navajo Health Authority, was initiated to keep abreast of the developing medical school in northern Arizona. Dr. Callan responded by letter on July 10, 1974 in part

as follows and enclosed a statement of philosophy which is being revised.

"Location:

Twelve sites on the Reservation have been assessed for placement of the medical school. The final decision as yet to be announced, but indications are it will be located proximate to a hospital over 200-bed capacity. One is currently being constructed in Tuba City and plans for a 210-bed hospital are developed for Shiprock.

"Size:

We are thinking in terms of a total net square feet of 81,450, which should house teaching laboratories, faculty offices, student carrels, classrooms, animal facilities, support services, administration, health sciences library, etc. We anticipate beginning with 24 students per class and expand over time.

"Present Funding:

We currently receive funds from a variety of sources, including the Navajo Tribe, federal government and private foundations. Our total budget is approximately Three Million Dollars per annum. We anticipate a capital outlay of Thirty-three Million for the medical school and 6-7 million operating budget per annum solely for the medical school. We will be looking to all possible sources for future funding and continued sustaining funding.

"Sponsorship:

The sponsorship of the school is Pan-Indian as it is intended to provide training for individuals from all Tribes and non-Indian as well.

"Current status of development is that we are recognized as a developing medical school by AAMC/AMA,

whose liaison committee made a site visit to the Reservation in early 1973.

"The Navajo Health Authority is a legal tribal entity. Our relationship to United States Indian Health Service and United States Public Health Service is through contracts and evaluation activities. There is no formal tie to those services."

It was determined to invite Dr. Callon and Dean Taylor McKenzie, M.D. to the next meeting of the Medical Education Committee for presentation of further development information regarding the new medical school.

JOINT COMMISSION ON ACCREDITATION / CME REQUIREMENTS

Letter was received from Walter O. Boswell Memorial Hospital, Sun City, informing us that during recent review by the Joint Commission on Accreditation of Hospitals it was recommended that "the medical staff should document its members' participation in continuing medical education programs outside the hospital as well as hospital-based activities." It appears that this would duplicate the reporting requirements of the Association. The Hospital Administrator requested either a copy of our reporting records or the opportunity to assure the Joint Committee that these records are on file at the ArMA office and available for review. In that it appears that this was a verbal recommendation of the Accreditation inspector the matter was received for information until further information is received from the AMA.

SECTION ON REQUIREMENTS

Dr. Wagner reported that the Section on Requirements met for two hours immediately prior to the convening of this meeting and has prepared the final draft of the "Guidelines for the 1975 Certificate in Continuing Medical Education." The draft will be presented in final form to the Medical Education Committee at its next meeting.

SECTION ON CERTIFICATION

Dr. Taylor reported that to date a total of 177 physicians had not submitted a complete application of continuing medical education activities as required. Of this total 65 physicians had sent in partially completed applications, neglected to submit the application fee or informed us of their retirement or disability. One member informed the Committee of his resignation from the Association because of the requirement and two indicated by letter their intent not to comply.

The Section on Certification determined to contact the remaining 112 members personally to encourage them to send in their applications immediately and requested the assistance of the members of the Medical Education Committee in this endeavor.

It was agreed that each member of the Medical Education Committee would contact physicians who had not submitted their continuing medical education activities to date and that staff would coordinate this activity and report to Committee during its next meeting.

OTHER BUSINESS

MARICOPA COUNTY ASSOCIATION FOR GRADUATE MEDICAL EDUCATION

Drs. Flood and Stark reported on the activities of the Maricopa County Association for Graduate Medical Education. There have been two meetings of physicians and administrators representing several Valley hospitals to discuss possible benefits of cooperating in development and/or operation of graduate and continuing medical education programs. The Resolutions adopted at the second meeting held July 22, 1974 were as follows.

- 1) The name of the organization — Maricopa County Association for Graduate Medical Education.
- 2) Membership of the organization to consist of representatives of the institutions in Maricopa County which have graduate medical education programs or which are affiliated with such institutions in an educational capacity.
- 3) The organization will be free standing.
- 4) The main functions are as follows:
 - a. Coordination of existing programs.
 - b. Mediation on request of any institutions seeking their help.
 - c. Representation of the Phoenix Medical Education community in negotiations with non-member institutions.
 - d. Long and short range planning for evolution of programs in response to local needs and outside pressures, regulations and laws. It will actively support any program granted AMA approval and may support those seeking approval as deemed feasible by Executive Committee.
 - e. Provide a forum for medical education.
 - f. Receiving community-wide reaction and support to new programs or modification of existing programs.
- 5) The philosophy is that of an association leaving autonomy of individual institutions intact whenever compatible with the interests of the total community. Present grouping of programs within individual disciplines probably represents some special considerations of balance of training and experience and logistic convenience. An initiative for combining all programs within a discipline in a single city-wide program should originate in the individual programs.
- 6) A coordinating committee of the three directors of medical education will select an additional four members of the group to form a steering committee. The seven will select a chairman and will function in an executive capacity until the next meeting scheduled for early September. This committee will draw up bylaws proposals for discussion at the next meeting.

It was determined that Jack Layton, M.D., Chairman of the Section on Graduate Medical Education, be apprised of the developing Maricopa County Association for Graduate Medical Education and coordinate its activities with the Section.

ACCREDITATION OF HOSPITAL CONTINUING MEDICAL EDUCATION ACTIVITIES

Dr. Payne expressed concern that hospitals and their administrators were not sufficiently aware of the accred-

ditionation process initiated by the Association for continuing medical education programs. It was determined that a follow-up of the accreditation project was in order through the Section on Accreditation.

Meeting adjourned 8:44 p.m.

William E. Crisp, M.D., Secretary
Gary L. Barnett
Associate Executive Director

MATERNAL AND CHILD HEALTH CARE COMMITTEE

Meeting of the Maternal and Child Health Care Committee of the Arizona Medical Association, Inc., held at 810 West Bethany Home Road, Phoenix, Arizona, on Thursday, September 5, 1974, a quorum being present, convened at 7:09 p.m., Raymond J. Jennett, M.D., Chairman, presiding.

MINUTES

The minutes of the meeting held June 6, 1974, were approved as distributed.

SECTION ON DATA COLLECTION AND ANALYSIS

Health Information Center

Dr. Moore reviewed the past history of the attempt to develop a Health Information Center within the Department of Health Services. It was noted that a conclusion had been reached that new legislation would not be needed to create such a center, but that it could be done under existing rules and regulations.

Concern was expressed that movement toward the creation of the Center was not moving along as fast as needed.

It was agreed that the Section on Data Collection and Analysis would compose a letter incorporating their ideas and suggestions to be forwarded to the Director of the Department of Health Services.

SECTION ON MATERNAL SERVICES

Arizona Maternal Mortality Study

Drs. Pent and Cherny reviewed the Arizona Maternal Mortality Study as follows:

1. Case Finding

The current program for case finding utilizes the death certificates from the State health Department as outlined by Dr. Humphrey (1). Certain administrative problems, especially pertaining to cost, are outlined in his more recent letter, dated July 9, 1974 (1A). At the present time we are able to receive the death certificates at the rate of 50c per certificate, instead of \$2.00, but I plan to discuss the entire matter with Dr. Schamadan, the head of the Arizona Department of Health Services, at a meeting that I have with him scheduled in the near future.

There is, of course, the item on the current death certificate for indicating whether or not the patient had been pregnant in the year prior to her death. Many times, however, this is ignored and a follow up letter is required either from the Maternal Mortality Study or from the State Health Department. A copy of the letter used by the Maternal Mortality Committee is attached (2). Better cooperation from physicians might be achieved if it appeared that the inquiry originated from the State Health Department and concerned the Department's own death certificate, as opposed to a question being raised by an "investigative" committee. In addition I feel it is import-

ant that inquiries from the Maternal Mortality Study be kept to a minimum. However, in terms of efficiency there is little doubt that an inquiry from the Maternal Mortality Study would help in promptly determining if the death was a maternal mortality, and the earlier that this information can be ascertained the more profitable is the subsequent inquiry.

A considerable amount of difficulty was encountered in the past when the Committee attempted to obtain information on coroner's cases here in Maricopa County. Enclosed is a copy of the letter from the then County Medical Examiner (3). Whether this is still the opinion of the current Medical Examiner and what steps can be taken to remedy it will be looked into in the near future.

A meeting with osteopathic physicians is planned, outlining the aims and purposes of the Maternal Mortality Study, as a means of improving physician participation.

A meeting with hospital administrators is also planned. It is hoped that hospitals will report maternal deaths as they occur, since the earlier a case can be investigated the more fruitful is the investigation. Also, as outlined later in this report, early reporting of maternal deaths might enable autopsies and special pathological examinations to be performed which otherwise would not be carried out. A form for the hospitals to use in cases of maternal deaths is enclosed (4).

2. Assigning a Number to the Case. Beginning a Folder on the Case.

Each case will be identified by three two digit numbers. The first two digits will represent the year of death, with 74 representing 1974, 75 representing 1975, etc. The second two digits will represent the county in which the death occurred, and in this regard all the counties in Arizona have been assigned a number on the basis of alphabetical listing, so that Apache County is 01, etc. The final two digit numbers will be assigned to each maternal death, as it is reported in the country. The first maternal death in the county for that year will be designated as 01, the next one is 02, etc. Therefore a number such as 74-07-04 would mean that the maternal death had occurred in 1974 in Maricopa County and was the fourth of the year being investigated in that county.

3. Release of Information from the Attending Physician.

A major concern has been the matter of confidentiality, and with malpractice premiums being what they are this is understandably foremost in the minds of almost all physicians in the state. In addition to the usual precautions to insure anonymity, I plan on disguising the case by making alterations in the age, parity, dates, etc. prior to having the case published in Arizona Medicine or utilized for teaching purposes. Some consideration should also be given to the passage of a confidentiality law in our state, so as to protect the work not only of the Maternal Mortality Committee but also other similar committees.

In the past, correspondence to the Maternal Mortality Committee has been directed to Suite 109, 2021 North Central Avenue, Phoenix, Arizona 85004. This has been the location of my office, but in the future it is planned to obtain a Post Office Box here in Phoenix to which all inquiries and correspondence will be addressed. There are several reasons for this. First, my office will probably

move within the next several years, and secondly, there is a limit to my tenure as Chairman of the Maternal Mortality Study. Both of these would result in all the usual problems that go with a change in address. Thirdly, there are probably few things that are more impersonal, business-like and anonymous in appearance than a Post Office Box.

A copy of the letter sent to the attending physician is enclosed (5) along with a copy of the release which he is asked to sign (6). An approach used by the Minnesota Maternal Mortality Committee simply states that the doctor will be out to investigate the maternal death, and the latter is referred to as "the patient who died recently". (The patient's name is not mentioned unless it is a coroner's death or an indirect obstetrical death, in which case the attending physician might not be aware of the patient's death). They also state in the letter to the doctor that "we have been fortunate in obtaining the services of" and then naming their investigator. They also place the "blame" for the entire project on the Medical Society to which the attending physician is a member. With this approach they have always achieved complete physician participation and cooperation. I think that this is an alternative to our present method, which might be worthy of consideration at some time in the future.

4. Release of Information from the Hospital.

There has been understandably some reluctance on the part of the administrators of government installations, specifically the military hospitals and public health service hospitals, to release information to an organization which is functioning at a state level. This basically involves four military hospitals: Luke Air Force Base, Williams Air Force Base, Davis-Monthan Air Force Base, and Fort Huachuca. It also involves all of the United States Public Health Service Facilities. Dr. Christian will be looking into this matter, so as to obtain the cooperation of these facilities and personnel in the future.

5. Committee Consultant

When the Maternal Mortality Study was first implemented, senior residents from the various teaching hospitals were utilized as the case investigators. The thinking behind this was (1) the investigator is really not presenting any opinions, but is merely collecting data and that therefore third year residents should be able to more than adequately perform this duty, and (2) by not having another practicing obstetrician as the investigator it removed the stigma of having a "competitor" looking over the physician's shoulder at a time when he may have made a "mistake".

In retrospect the system had some deficiencies. The case summaries which were to be presented to the Committee varied considerably in thoroughness, clarity and grammar, so that it was necessary for me to individually rewrite virtually all of the summaries. I believe that the idea of having one investigator is a good one, and would contribute very significantly to the efficient functioning of the Maternal Mortality Committee. It is somewhat unrealistic to expect that a private practicing obstetrician will be able to find the time to perform this efficiently and dependably. It therefore seems best to use a resident physician, and in consultation with Dr. Donald Christian there is currently a second year resident in his four year program at the University who he feels is well qualified

for this task, and who will be permitted the time off for case investigations. Since he is beginning his second year of residency in the four year program, we will be able to utilize the same investigator for at least three years. He will be paid \$100.00 a day plus mileage, which is comparable to stipends being paid by other maternal mortality studies, and is certainly more realistic than the previous \$10.00 an hour which was used eight years ago.

A letter is sent out to the consultant, and a copy of this is enclosed (7). Sent along with this is a copy of the death certificate, a copy of the permit from the attending physician, a protocol and a voucher (8).

6. Instruction Form for the Protocol

The consultant will receive a four page outline, giving detailed instructions as to the completion of the case study protocol (9).

7. Protocol

A copy of the protocol (10) is enclosed. Much of this is patterned after the form used by the California Maternal Mortality Study. This was done to permit statistical comparisons between the finds of our study and their long established program.

8. Summary Prepared, Slides, X-Rays

It is expected that in addition to completing the protocol and preparing the case summary the consultant will obtain pertinent X-ray material and pathological specimens and slides for utilization by the Committee's consultants.

9. Discussant Assigned

One of the Committee members will be designated as the discussant for each case. He will present the case, and give his opinions and thoughts on the management of the case along with appropriate references.

10. Committee Members

Originally the membership of the Committee was composed along lines suggested by the American Medical Association Guide for Maternal Mortality Committees. There were obstetricians and gynecologists, general practitioners, anesthesiologists, pathologists, and public health officials. We originally had two members from each of these specialties, so that if one was unable to attend the other one would be present at the meeting. However, in retrospect this made the whole committee more cumbersome. I believe that in the future a more efficient committee could be achieved by having it composed primarily of obstetricians and gynecologists, along with one family physician, one pathologist and one anesthesiologist. Specific consultants such as hematologists, cardiologists, etc. could be invited as indicated.

11. Committee Meetings

The meeting would best be held as a luncheon meeting, commencing at approximately ten o'clock in the morning and continuing until approximately four in the afternoon. This would enable people throughout the state to attend the meeting and return on the same day in most cases. It would probably be best to hold the meeting in Phoenix or Tucson, possibly occasionally in Flagstaff. Consideration can also be given to conducting a meeting at the time of the State Medical Association in the Spring, and also consideration can be given to holding the meeting in conjunction with the State Ob-Gyn Association meetings.

12. The Attending Physician

The attending physician in the case will be invited to attend the Maternal Mortality Committee meeting where his case is to be discussed. If he attends the meeting, the findings will, of course, be known to him. If he is not present, the Committee's conclusions can be sent to him in a written letter via registered mail. Only one letter is to be sent and that will be sent to the attending physician, so that the Committee will not be taking a role in any disciplinary action, such as staff privileges.

13. Preventability (Avoidability) and Responsibility

Factors

The letter to the attending physician should list the cause of death and any criticism of the management of the case with regard to (1) prenatal care, (2) management of labor and delivery, (3) management of the puerperium, (4) autopsy, (5) death certificate, and (6) birth certificate. It should also include factors of preventability (avoidability) and responsibility. All deaths will be classified under the classification for maternal deaths, and a determination therefore made as to whether the death was due to direct obstetric causes, indirect obstetric causes, or to no non-related causes.

Preventability can be a wide and broad term. The death can be considered preventable if the patient was denied contraception after she had requested it. Also to be evaluated is whether or not to make a distinction, with regard to preventability, if a general practitioner or an obstetrician had managed the case. Consideration of these factors is, of course, the responsibility of the Committee. The analysis of avoidable factors should be supported by references. Responsibility is assigned either to the doctor, to the patient or to the hospital, or to any combination of these.

14. Education

Case reports of the Maternal Mortality Study can be carried on the Ob-Gyn Page in Arizona Medicine, or can also be published in Arizona Medicine as a separate report independent of the page devoted to Obstetrics and Gynecology.

Presentation can also be made at the State Medical Society meeting, as was done in 1970.

Consideration can also be given to conducting "mock" committee meetings in conjunction with local county medical society meetings.

An annual report of the Committee's activities should be prepared and published in Arizona Medicine.

Consideration can also be given by the Committee to having a booth with appropriate charts and graphs at the Annual Meeting of the State Medical Association.

15. Financing

At the present time the Maternal Mortality Study has slightly in excess of \$450.00 in a checking account at the Continental Bank in Phoenix. This is left over from monies previously appropriated by the State Health Department.

In addition funds have been appropriated through the Arizona Section of the American College of Obstetricians and Gynecologists.

The Maternal and Child Care Committee to the Arizona Medical Association has offered its support to the project.

(Note: Attachments referred to are available as a part of the records of this meeting.)

Mandatory Health Insurance for Pregnant Women

The subject of seeking legislation making it mandatory to provide provisions for full pregnancy coverage in health insurance policies was discussed. It was determined that this would be an appropriate subject for the Section on Maternal Service to pursue.

SECTION OF PERINATAL PLANNING

Robert Wood Johnson Foundation

Dr. Giles reported that the proposal to the subject organization for regional perinatal care in Arizona has been submitted and receipt acknowledged. Mr. Robinson was directed to see that all committee members received a copy. (A copy of the proposal is available for review at the Association offices).

SECTION ON SERVICES FOR CHILDREN

Fluoridation

Dr. Friedman reviewed the action of his Section regarding fluoridation. Following extensive discussion the following action was taken:

It was moved and carried to recommend to the Board of Directors that they adopt the following resolution as the official position of the Association on the subject of fluoridation:

"WHEREAS, Dental disease is the most prevalent of all diseases in our children, 95% of our children have multiple tooth decay, 50% of our children have malocclusion often as a result of dental disease, thousands of our children suffer infection, pain and discomfort from dental disease resulting in the loss of untold hours from school; and

WHEREAS, Prevention is always the treatment of choice for any disease, both from an economic and comfort standpoint; and

WHEREAS, Fifty years of research and twenty-eight years of practical experience has shown that the adjustment of the fluoride content of communal water supplies to the optimal level is a safe, economical and simple public health measure resulting in the two-thirds reduction of dental decay in children born and raised in optimally fluoridated communities; and

WHEREAS, Evidence indicates that the benefits obtained from optimally fluoridated water carry over into adulthood; therefore be it

RESOLVED, That the Arizona Medical Association endorses the concept of community water fluoridation as a safe, economical and efficient measure for preventing dental disease."

Functional Procedures for the Arizona State Community Coordinated Child Care Planning Committee

Dr. Friedman reviewed the request for endorsement of the subject procedures received from the Arizona Department of Economic Security as follows:

I. Name: Arizona State Community Coordinated Child Care Planning Committee (AZ4C)

II. Purpose, Scope and Mission:

A. The Arizona State Community Coordinated Child Care Planning Committee (AZ4C) serves as a mechanism for the coordination, planning and promotion of

comprehensive services to children from birth through age eighteen. Such comprehensive services are defined as the systematic interaction and delivery of all services necessary for the intellectual, social, emotional and physical growth of the child.

B. The primary function of the committee (AZ4C) is to promote the Community Coordinated Child Care (4-C) concept in Arizona. In carrying out this function, the committee will recommend 4-C policy to the Arizona Department of Economic Security, grant formal recognition to community coordinating mechanisms that meet established 4-C criteria, and lend assistance to other community coordinating mechanisms that are actively pursuing the intent of the 4-C concept.

C. The concern of AZ4C are predicated on the need to utilize and coordinate to the maximum extent possible all public, voluntary and proprietary resources for children to insure the delivery of quality services on a community-wide basis.

III. Responsibilities

In accordance with the purpose, scope and mission described in Section II, the following shall constitute the principal responsibilities of the AZ4C:

A. Serve as the Advisory Committee on Child Care to the Governor, the Arizona Department of Economic Security and other state agencies for those matters relating to comprehensive services and community level child care coordinative mechanisms.

B. Provide a centralized point of contact for state agencies and community level committees concerning technical assistance and information pertaining to the coordination, planning and delivery of comprehensive developmental services to children.

C. Provide technical assistance and information to communities that have developed or propose to develop programs according to the 4-C concept. High priority will be accorded the encouragement of communities in the development or strengthening of coordinative mechanisms (4-C committees).

D. Review and take appropriate action on application for recognition of community 4-C programs and conduct a periodic review thereof.

E. Recommend communities for special 4-C projects.

F. Encourage multiple shared support for local 4-C programs.

G. Prepare and submit to Department of Economic Security such reports as may be required on the activities and progress of the state and community level 4-C committees.

IV. Structure

A. AZ4C is an official committee appointed by the Governor to serve in an advisory capacity to the Arizona Department of Economic Security.

B. The committee shall consist of not less than 21 members with at least one-third being representative parent consumers the majority of which will be low income members, one-third representative public agency employees, and one-third from private agencies, state-wide organizations, professional groups or the private sector.

C. Duties: each member shall attend regular meetings and shall also participate in any subcommittee activities and deliberations, including field visits, at the request

of the chairman. Each member shall receive regular committee Minutes, documents and other informative material and shall have access to all committee correspondence, subcommittee Minutes and documents upon request.

D. Officers

1. Chairman

a. **Selections:** shall be elected by the committee from the membership.

b. **Duties:** the duties shall be those assigned by the committee to include:

- (1) Call and preside over all AZ4C meetings.
- (2) Be an ex-officio member of subcommittees.
- (3) Provide overall direction and coordination of all 4-C activities in the state.
- (4) Be the official formal spokesman for the State Advisory Committee.
- (5) Serve as the official point of contact between AZ4C and the Federal Regional Coordinating Committee (FR4C).
- (6) Keep AZ4C members abreast of all pertinent information affecting the 4-C program.
- (7) Supervise preparation of reports of the AZ4C as appropriate for distribution to:
 - a. The Governor
 - b. Director of the Department of Economic Security
 - c. Appropriate State Agencies
 - d. Local 4-C committees
 - e. Units of government and non-profit agencies

2. Vice Chairman

a. **Section:** elected by the committee

b. **Duties:** those assigned by the Chairman including performance of all duties of the Chairman on the latter's absence.

E. Executive Committee

1. **Selection:** appointed by the Chairman

2. **Composition:** Five members including Chairman and Vice Chairman, and three members to be appointed by the Chairman as needed.

3. **Duties:** shall transact necessary business between regular meetings of the committee. Five (5) members shall constitute a quorum.

F. Subcommittees

Standard and special purpose subcommittees may be created by the committee when deemed necessary and appropriate. Subcommittee members shall be appointed by the Chairman and may include persons outside the membership of AZ4C, except that any subcommittee chairman must be a member of AZ4C.

G. Staff

The staff will consist of a Program Coordinator and a Secretary, who will be assigned to function, under the general direction of the Chairman, and be accountable to the Chief of the Community Support Bureau.

V. Procedures

A. Voting

1. Each member shall have one vote.

2. All decisions shall be made by majority vote of the members present. No vote can bind a member in respect to a programmatic decision of his or her agency.

3. The Chairman may conduct poll votes on any issue as required, using any suitable means. A majority of members shall constitute a decision.

B. Quorum

In order to conduct business, there must be a simple majority of the committee members present.

C. Meetings

AZ4C shall meet at least four (4) times per year. The Chairman shall call such additional meetings as needed.

D. Agenda

Agenda for AZ4C meetings are developed by the Chairman with the assistance of the Program Coordinator. AZ4C members may propose agenda items. Other agencies, groups, organizations or individuals, desiring to place items on the agenda should present them and statements of purpose to the Chairman.

VI. Work Planning, Reporting and Evaluation

A. AZ4C shall develop an annual work plan.

B. The Chairman with the assistance of the Program Coordinator shall prepare quarterly progress reports describing the activities of AZ4C and pointing up matters which require committee action. An annual evaluation and report of AZ4C activities shall also be prepared and distributed.

C. Minutes will be kept of all meetings and will be submitted to Department of Economic Security for review and consideration.

It was moved and carried to recommend to the Board of Directors that this Association endorse the "Functional Procedures" as requested.

Medicaid

Mr. Robinson reviewed the manner in which the Association's advisory committee for medicaid was created. He reported that the first meeting of that group was scheduled for September 12th, and that it is very likely that the medicaid committee will call upon sections of the Maternal and Child Health Care Committee for assistance as things develop.

Crippled Childrens Services

Dr. Schamadan reviewed the past and present status of the Crippled Childrens Services organization. He stated that the Bylaws for that organization are currently being rewritten and that he would make them available as soon as possible. He also reviewed the status of the current law suit filed against the Crippled Childrens Service.

The meeting adjourned at 9:58 p.m.

William E. Crisp, M.D.

Secretary

Bruce E. Robinson

Executive Director

PROFESSIONAL COMMITTEE

The meeting of the Professional Committee of the Arizona Medical Association, Inc., held at 810 West Bethany Home Road, Phoenix, Arizona on Saturday, September 7, 1974, a quorum being present, convened at 2:01 p.m., Robert S. Ganelin, M.D., Chairman, presiding.

MINUTES

The minutes of the meeting held November 10, 1973 were approved as distributed.

SECTION ON AGING AND GENERAL MEDICINE

Committee on Cancer

The Board of Directors in meeting held June 15, 1974 referred letter of May 23, 1974 from William C. Trier, M.D., Chairman, Professional Education Committee, American Cancer Society, Arizona Division, suggesting the possibility of creating a standing committee on cancer within the Association structure to provide liaison between the two organizations, to the Professional Committee for consideration.

It was moved and carried to recommend that the section on Allied Medical Groups include a member of the Arizona Division, American Cancer Society, within its committee to provide appropriate liaison.

Immunization Action Month (IAM) October 1974

AMA encourages all state medical associations to designate representatives to state IAM committees to determine and develop state objectives and programs for the IAM Program of 1974. The Immunization Public Health Advisor for Arizona is William M. Smith, Arizona Department of Health Services. It was reported that Mr. Smith called one meeting in which Dr. Ganelin was invited to attend.

It was moved and carried to support Immunization Action Month and that Robert S. Ganelin, M.D., be the Association's representative to the Committee.

Dieting — European Health Spa

Laurance B. Nilsen, M.D. favored the Association with a copy of a letter to the European Health Spa, North 19th Avenue, Phoenix, in which he expressed concern that a "low carbohydrate diet" is being promulgated without previous consultation with customers' physicians and by people who are entirely unfamiliar with all literature warning against an unlimited intake of saturated fats in spite of data which abounds in most of the lay publications. Dr. Nilsen also cited a specific problem of one of his patients under care for hypopituitarism with an additional problem of obesity who, as a result of the Health Spa's urging to go on the diet advertised as "low carbohydrate," gained 40 pounds within four to five months.

It was moved and carried to acknowledge Dr. Nilsen's concern in this matter and determine whether this Association can be of assistance in having appropriate corrective measures instituted.

Criteria for the Diagnosis of Alcoholism

At the request of the AMA Committee on Alcoholism the "Criteria for the Diagnosis of Alcoholism" developed by the National Council on Alcoholism was reviewed for appropriate comments and suggestions for future revision.

It was moved and carried to inform the AMA Committee on Alcoholism that the "Criteria for the Diagnosis of Alcoholism" is a commendable document with no suggestions for revision.

Patient Records to Succeeding Physician

The Association's staff reported that they received several comments that physicians are not transferring patient records to the succeeding physician promptly and in some cases refusing to transfer records altogether. Generally the complaint to transfer records is based on the unpaid bill of a former physician.

It was noted that Section 9 of the AMA Judicial Council Opinions and Reports covers this situation; "It is unethical for a physician, who formerly treated a patient, to refuse for any reason to make his records of that patient promptly available upon request to another physician presently treating the patient."

It was moved and carried to publicize the ethics of forwarding patient records to succeeding physicians in "Medical Memos" by quoting from the appropriate sections of the AMA Judicial Council Opinions and Reports.

Report by Venereal Disease Action Committee — Maricopa County

The Venereal Disease Action Committee of Maricopa County released a report surveying the nature and extent of Venereal Disease in Maricopa County and requested the Association to review it and take action to help bring about the implementation of the recommendations included.

It was moved and carried to defer action on the Venereal Disease Action Committee Report until such time as the Section on Aging and General Medicine can make recommendation to the Committee.

SECTION ON ASNA LIAISON

Identification of R.N.'s by compulsory wearing of caps

Letter was received from D. W. Melick, M.D. with copy of letter sent to the Arizona State Nurses Association regarding a personal experience of hospitalization in which it was nearly impossible to identify the registered nurse and the professional qualifications of others in attendance. It was requested that the Association discuss "compulsory capping as an appropriate method of identification."

It was noted that the Arizona State Nurses Association did consider Dr. Melick's suggestions to have all R.N.'s wear caps and agree that the patient, family and everyone should know who the R.N. is, but that the cap has proven most ineffective as a method of identification.

The Board of Directors of the Arizona State Nurses Association indicates that they will continue to pursue this issue.

It was moved and carried to receive Dr. Melick's letter for information as the Arizona State Board of Nursing, Board of Directors indicates their willingness to deal with this matter.

Arizona State Board of Nursing — Extended Role of the Nurse

Dr. Payne reported that the Association has continued to make recommendation to the Arizona State Board of Nursing as it develops rules and regulations for the "Extended Role of the Nurse." The most recent rules and regulations of the State Board of Nursing had to do with the "criteria for establishing courses of study for the extended role in Nursing — Arizona and Family Nurse Practitioner." Draft No. 5 of the proposed new rules was received on May 13, 1974 through the Board of Medical Examiners and recommendations were made on the same date in a letter to the Executive Secretary of the State Board of Nursing. The following are the proposed sections in the rules and regulations and actions taken by the Board of Nursing.

Criteria for establishing courses of study for extended role in nursing. Paragraph D. Condition for approval.

Proposed: 2(b) Evaluate the assessment data in order to make prospective decisions about treatment in collaboration with physicians and other health professionals.

Recommendation: 2(b) Evaluate the assessment data in order to consult with the physician about prospective treatment.

RECOMMENDATION NOT ACCEPTED.

Specialty areas in the extended role.

Paragraph C. Prerequisites and Act for the Practice of Family Nurse Practitioner.

Proposed: 2(e) Assumes responsibility for an on-going health maintenance and clinical management of stable chronically ill patients.

Recommendation: 2(e) Assumes responsibility for on-going health maintenance of stable chronically ill patients.

RECOMMENDATION NOT ACCEPTED.

Proposed: 2(g) Identifies and manages minor and/or acute illness and prescribes symptomatic treatment.

Recommendation: 2(g) Identifies and manages minor and/or acute illness and initiates symptomatic treatment.

RECOMMENDATION ACCEPTED.

Proposed: 2(i) Evaluates progress and manages prenatal and post partum care in normal pregnancies.

Recommendation: 2(i) Evaluates progress of prenatal and post partum care in normal pregnancies.

RECOMMENDATION NOT ACCEPTED.

Proposed: (2l) Recommends non-prescription (over counter) medication.

Recommendation: 2(l) Delete in its entirety.

RECOMMENDATION ACCEPTED.

Proposed: 2(m) Regulates or adjusts medications and treatments as prescribed or authorized by a licensed physician.

Recommendation: 2(m) Regulates or adjusts medications and treatments as directed by a licensed physician.

RECOMMENDATION NOT ACCEPTED.

It was further reported that Senate Bill 1269 adopted and effective May 22, 1974 changed the Nurses Practice Act as it effects the extended role of the nurse and provides for the Board of Nursing to adopt rules and regulations "in collaboration with the Joint Board of Medical Examiners in Medicine and Surgery." The rules and regulations of the Board of Nursing were adopted on May 24, 1974 without collaboration of the Joint Board as provided by Senate Bill 1269 effective May 22, 1974. It was pointed out that should the Arizona Medical Association not be satisfied with the regulations as promulgated by the Board of Nursing that the Board of Medical Examiners should be notified and recommendation for amendments should be made as soon as possible.

It was moved and carried to recommend to the Board of Directors that the Association notify the Board of Medical Examiners of its concerns with the Rules and Regulations adopted by the Arizona State Board of Nursing, May 24, 1974, as pertain to the criteria for establishing courses of study for the extended role in Nursing — Arizona and Family Nurse Practitioner, and request that they review the Association's recommendations for appropriate modifications of the Rules and Regulations as cited.

SECTION ON ATHLETIC MEDICINE

Neil O. Ward, M.D. reported that the Section on Athletic Medicine is once again preparing for its activity of the coming season. As a result of the Association's approval of the concept of athletic training program, ASU now has seven student trainers in their initial program. The publication "Sports Illness Treated" has been enthusiastically received and will again begin publication September 1974. Dr. Ward reported that the Section on Athletic Medicine would be represented at the Arizona Interscholastic Association meeting and is considering co-sponsorship at a clinical coaches and trainers session next summer.

Report received for information and congratulations expressed for outstanding activity of the Section on Athletic Medicine.

SECTION ON EMERGENCY CARE

House Bill 2001 (Paramedics)

Donald F. Schaller, M.D. reported that HB 2001 adopted during special session of the Arizona Legislature concerns itself with the training, qualification and certification of emergency services personnel (paramedics). The Section has been asked to act as an advisory council to the Department of Health Services and assist in establishing the criteria under which the paramedic will operate. The Section will include as members representatives from the Emergency Room Nurses Association, the American Osteopathic Association, the Emergency Room Physicians Association and will work closely with Suzanne Dandoy, M.D., Department of Health Services, in outlining its functions. REPORT RECEIVED FOR INFORMATION.

Emergency Services Categorization for Arizona

Dr. Schaller reported that the Section on Emergency Services had endorsed a comprehensive hospital emergency department survey form developed in cooperation with the Arizona Hospital Association and the Arizona Department of Health Services. The survey form is intended to self-categorize the medical level of emergency services each hospital provides and will enable all emergency and health services related organizations in Arizona to become aware of available emergency service facilities and their capabilities. It will also aid in development of a statewide emergency service system and fulfill a mandatory federal prerequisite for funding under Public Law 93154. REPORT RECEIVED FOR INFORMATION.

SECTION ON DRUG ABUSE

Membership

Dr. Linkner informed the Committee that membership to the Section on Drug Abuse includes the following: Drs. Merlin W. Kampfer, Eugene J. Ryan, Peter J. Whitney and Wayne F. Winn.

Marijuana

It was reported that the possession of marijuana with or without sale is still a felony in Arizona.

Methodone Maintenance

Dr. Linkner reported that there are currently six methodone maintenance programs in Arizona. This is completely inadequate as there are approximately 2,000 heroine addicts in Maricopa County and another 1,000 in Pima County. Funds are being requested to broaden

the methodone maintenance programs in Arizona as it is currently considered to be the most efficient method of treating heroine addicts.

Controlled Substance Act

The Board of Pharmacy has introduced legislation providing for the Controlled Substance Act during the last four legislative sessions without success. ArMA supported the concept in principle. The primary reason for failure of enactment has been argument over how marijuana should be classed and inclusion in the bill of unrelated items such as registration of detail men, labeling provisions, registration of physicians, prohibition of samples and whether the provisions of the Controlled Substance Act belong in the Pharmacy Code or Criminal Code. The Board of Pharmacy assures us that a clean uniform Controlled Substance Act will be introduced during the next legislative session.

House Bill 2120 — Prohibition Against Probation and Suspended Sentence for Drug Violators Enactment

Dr. Linkner reported that legislation was enacted during the last session prohibiting the probation or suspended sentence for conviction of possession, import, transport, sales and traffic of narcotic drugs, other than marijuana, and further, persons convicted of the violation of inducing minors to violate narcotic drug laws shall not be granted probation nor shall the execution of sentence imposed on such a person be suspended. The Association actively opposed this legislation due to the New York experience of 8 months as it was a total failure. A recent report of 18 months duration indicates that the New York experience is still a failure. Plea bargaining still goes on and judges still refuse to be mandated on sentencing.

House Bill 1308 — Alcohol and Drug Detoxification

Legislation was introduced and held in Senate during last session providing for the Department of Health Services to adopt regulations and standards for control and use of narcotic or dangerous drugs for treatment of addiction to or dependency on alcohol or other drugs. Due to the inability of agencies concerned to agree on appropriate resolution of the bill it was held in Senate Rules.

Desk Reference on Drug Abuse

The Desk Reference on Drug Abuse was completed and distribution made available to all physicians in the state during May 1974 by the Arizona Department of Health Services. To date the Department has distributed by request 500 copies to physicians, emergency rooms and other interested persons in the state.

Registration of Detail Men

Registration of detail men, labeling provisions and other items under consideration will be introduced as separate bills on their own merits.

Unsolicited Samples of Prescription-Only or Dangerous Drugs Prohibited

During the 1973 legislative session a bill was introduced to prohibit samples of prescriptions or dangerous drugs. ArMA supported an amended version of the concept, however, due to non-support of the Pharmaceutical Manufacturers Association it died in committee. PMA has since changed its position and according to *American Medical News* (April 15, 1974) "PMA's Board of Direc-

tors proposed ending distribution of unsolicited drug samples to physicians, pharmacists and other health professionals." It is proposed that legislation be re-introduced during the next legislative session providing that: No manufacturer or manufacturer's sales representative shall distribute any prescription-only or dangerous drug as a complimentary sample without the written request of a physician, dentist, podiatrist or veterinarian. Such requests shall contain the names and addresses of the supplier and the requester and the name and quantity of the specific prescription-only or dangerous drug desired.

The first attempt to provide across-the-board control on federally non-approved drugs was by the State of Illinois. Their legislature passed a law that makes it illegal for anyone to sell, hold for sale or give away any drug not approved by the Federal Food and Drug Administration. One group of drugs this law controls is the "anti-cancer" drugs, i.e., Laetrile and Krebiozen which have not been approved for distribution by the FDA.

It was moved and carried to recommend to the Board of Directors and the Legislative Committee that the Association actively support the principle of registration of Detail Men and distribution of unsolicited samples of prescription-only or dangerous drugs be prohibited.

SECTION ON MEDICINE AND RELIGION Membership

Joseph W. Hanss, Jr., M.D. reported that the Section on Medicine and Religion has been totally inactive during the past few years and that he is currently attempting to activate the Section. The AMA Committee on Medicine and Religion is extremely active and encourages state associations to become involved to facilitate the total care of the patient through spiritual as well as medical means. Dr. Hanss informed the Committee that he has requested the county societies to each appoint a member to the Section on Medicine and Religion with three counties reporting to date. It is his intention to promote county society activities through involvement of the State Association's Section on Medicine and Religion.

Ethics Panel

Dr. Hanss reported that one of the activities of the Section on Medicine and Religion that he contemplates would be to encourage the Scientific Assembly Committee to include on their program for the next annual meeting a panel on ethics. The panel would include prominent local members from the legal profession, medicine and religion. It was suggested that due to the shortage of time (the Scientific Assembly Committee is currently inviting suggestions) Dr. Hanss make application to the Scientific Assembly Committee soon.

It was moved and carried that the Professional Committee recommend to the Board of Directors that the Scientific Assembly Committee be encouraged to have a program or panel on ethics during its next Annual Meeting.

SECTION ON MENTAL HEALTH

Privileged Communications Act — House Bill 2186

Dr. Bindelglas reported that House Bill 2186 extending privileged communication between the doctor

and patient to mental diseases or disorders was adopted and approved by the Governor during the last legislative session. This proposal came about as a recommendation of the Section on Mental Health of the Professional Committee.

Mental Health Bill — Senate Bill 1035

Dr. Bindelglas reported that the Mental Health Bill (Senate Bill 1035) as adopted by the Arizona Legislature during the last session would become effective October 1, 1974. Dr. Bindelglas' personal reaction of the bill as enacted is that it is a bad law. It eliminates completely the private practitioner from determining whether one should be hospitalized; it defines danger to others to include only the danger of inflicting substantial bodily harm upon another person based upon a history of having inflicted or attempting to inflict substantial bodily harm upon another person within 12 months preceding a hearing and court-ordered treatment and specifically excludes consideration for those who are in the midst of an acute psychotic episode; it is extremely cumbersome to involuntarily hospitalize mental patients under the new law. Dr. Bindelglas reported that he intends to go over the law in detail and make recommendation for appropriate amendments.

Dr. Schaller informed the Committee that he was the Chairman of a committee on the new commitment bill of the Comprehensive Health Planning Council of Maricopa County and agreed with Dr. Bindelglas that amendments need to be perfected and introduced during the next legislature to take care of the bad portions of the law.

It was moved and carried that the Professional Committee urge the Legislative Committee to review Senate Bill 1035 and attempt to get it amended during the next Legislature.

SECTION ON POISON CONTROL

Dr. Helen Johnson reported that the Arizona Poisoning Control Information Center, College of Pharmacy, University of Arizona, has increased its availability of poison control information under the direction of A. L. Picchioni, Ph.D., Professor of Pharmacology. There are now four professors of pharmacology receiving calls through the University switchboard 24 hours a day. Frequent calls are received from the Tucson area, however, few are received from the Phoenix and non-metropolitan areas. Due to the great services that the Arizona Poisoning Control Information Center can give there is a need to make physicians and emergency room personnel aware of the Center.

It was moved and carried to publicize all available information on the Arizona Poisoning Control Information Center in "Medical Memos" as soon as possible.

SECTION ON PUBLIC HEALTH

Resignation

Frederick J. Brady, M.D., Chairman of the Section on Public Health by letter of August 20, 1974 respectfully requested that his resignation be accepted for the remaining two years of his term. Dr. Brady reports that he is retired and without an office or secretary and that he is spending a great deal of his time in the White Mountains area. It was determined to accept Dr. Brady's resignation with regret thanking him for his activities,

especially within the Subsection on Rural and Migrant Health.

Subsection on Rural and Migrant Health

President William G. Payne, M.D. informed the Committee that the Executive Committee in meeting held July 20, 1974 became aware of an apparent duplication of efforts by two groups within the Association, the Health Manpower Committee and the Subsection on Rural and Migrant Health. The Executive Committee requests that the Section on Public Health, Subsection on Rural and Migrant Health, direct its activities to matters not dealing with the health manpower so as not to duplicate activities of the Health Manpower Committee. Andrew W. Nichols, M.D., Chairman, Subsection on Rural and Migrant Health, presented the activities of the Committee. It was reported that Dr. Kossuth, Chairman, Health Manpower Committee, would welcome the Section on Rural and Migrant Health to be under the Health Manpower Committee. Considerable discussion ensued.

It was moved and carried to recommend to the Board of Directors that the Subsection on Rural and Migrant Health, Section on Public Health of the Professional Committee, be transferred to the Association's Health Manpower Committee as most of its activities relate to Manpower in the Rural Communities.

AMA Council on Rural Health

Dr. Nichols requested the Association's endorsement of invitation to the AMA to hold the 1977 annual meeting of the AMA Council on Rural Health in Arizona. He indicated that approximately 800 to 1,000 persons attend the annual meeting and that AMA had indicated a desire to hold a future meeting in either Tucson or Phoenix.

It was moved and carried to recommend to the Board of Directors that the Association invite the AMA to hold its 1977 Annual Meeting of the AMA Council on Rural Health in Arizona.

Commendation

Dr. Nichols reported that during the June 29, 1974 meeting of the Subsection on Rural and Migrant Health it was moved and carried to recommend to the Professional Committee that John G. Lingenfelter, M.D. be commended for his efforts and support of the experimental use of a physician's assistant in the Doland Springs area. He further reported that the Committee looked forward to hearing the results of the experiment as the Committee further investigates the question of physician extenders and their use in Arizona.

It was moved and carried to recommend to the Board of Directors that John G. Lingenfelter, M.D. be commended for his efforts and support of experimental use of physician's assistant in the Doland Springs area. The Association looks forward to evaluation of the experimentation by the Mohave County Medical Society.

Other Activities of the Subsection on

Rural and Migrant Health

As a result of the duplication of efforts between the Health Manpower Committee and the Subsection on Rural and Migrant Health it was determined to refer all other activities and recommendations of the Subsection to the Rural and Migrant Health Committee which will include Dr. Nichols as a member.

SECTION ON WOMEN'S AUXILIARY

James M. Hurley, M.D., Women's Auxiliary Advisor, reported that the Women's Auxiliary to the Arizona Medical Association, Board of Directors, met Thursday September 5, 1974 and had as its speaker Nancy Carroll, Coordinator of Home Emergency Lifeline for Parents — H.E.L.P. The "hotline" is for parents who are afraid they will abuse their children and need help. H.E.L.P. hopes to establish a crisis nursery. It was reported that the Maricopa County Women's Auxiliary won the AMA-ERF award for counties of their size at their national meeting. The health career charts have been updated and it was determined to order 10,000 to be distributed to Arizona schools and interested individuals. It was also reported that a pamphlet entitled "Better Health and Medical Care in America" will be included in the next mailing to all Arizona physicians. RECEIVED FOR INFORMATION ONLY.

CORRESPONDENCE

Board of Medical Examiners Request

Letter was received from the Board of Medical Examiners requesting the review and recommendation in a case involving a physician and a dying patient and the relationship of physicians with another physician's patient. Considerable discussion ensued.

It was moved and carried to recommend to the Board of Directors that the Arizona Medical Association adopt the following statement which was adopted by the House of Delegates, American Medical Association, December 1973:

The intentional termination of the life of one human being by another — mercy killing — is contrary to that for which the medical profession stands and is contrary to the policy of the Arizona Medical Association.

The cessation of the employment of extraordinary means to prolong the life of the body when there is irrefutable evidence that biological death is imminent is the decision of the patient and/or his immediate family. The advice and judgment of the physician should be freely available to the patient and/or his immediate family.

It was further moved and carried to recommend to the Board of Directors that if the aforementioned policy is approved, it be distributed to all competent medical societies for their information.

It was moved and carried to recommend to the Board of Directors the following policy:

That it is improper, without invitation to interfere directly or, through public announcements, appeal to special interest organizations, or the use of the press or other non-professional or non-legal means, to invite others to interfere in another physician's relationship with and management of his patients, except through established physician or hospital review and control mechanisms or through duly constituted and appropriate legal processes. Such interference would be considered unethical.

Meeting adjourned 5:02 p.m.

William E. Crisp, M.D.

Secretary

Gary L. Barnett

Associate Executive Director



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INDICATIONS: *Therapeutically*, used as an adjunct to appropriate systemic therapy for topical infections, primary or secondary, due to susceptible organisms, as in: • infected burns, skin grafts, surgical incisions, otitis externa • primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia) • secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis) • traumatic lesions, inflamed or suppurating as a result of bacterial infection. *Prophylactically*, the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing.

CONTRAINDICATIONS: Not for use in the eyes or external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of the components.

WARNING: Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where

absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

PRECAUTIONS: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.



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MOHAVE: Albert Rosenblatt, M.D., President, 412 E. Oak St., Kingman, 86401; Earl Gilbert, M.D., Secretary, Mohave General Hospital, Kingman, 86401.

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YAVAPAI: G. F. McNally, M.D., President, 2400 Nolte Dr., Prescott 86301; John Houston, M.D., Secretary, 533 W. Gurley, Prescott 86301.

YUMA: Dale F. Webb, M.D., President, 2244 Ave. A, Yuma, 85364; William J. Hultgen, M.D., Secretary, Kofa Station, Yuma, 85364.

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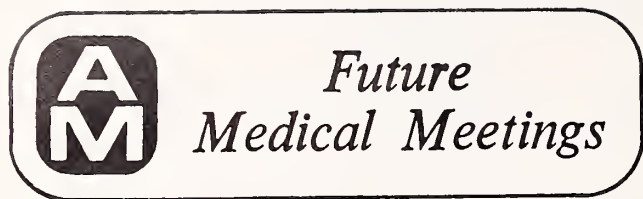
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Future Medical Meetings

CONTINUING MEDICAL EDUCATION

THE FOLLOWING INSTITUTIONS HAVE RECEIVED ArMA ACCREDITATION FOR CONTINUING MEDICAL EDUCATION.

GOOD SAMARITAN HOSPITAL, PHOENIX
MARICOPA COUNTY GENERAL HOSPITAL, PHOENIX
ST. LUKE'S HOSPITAL AND MEDICAL CENTER, PHOENIX
ST. JOSEPH'S HOSPITAL AND MEDICAL CENTER, PHOENIX
TUCSON HOSPITALS MEDICAL EDUCATION PROGRAM, TUCSON
VETERANS ADMINISTRATION CENTER, PRESCOTT

CONTINUING MEDICAL EDUCATION ACTIVITIES SPONSORED BY THESE INSTITUTIONS RECEIVE CATEGORY 1 CREDIT FOR THE ArMA CERTIFICATE IN CONTINUING MEDICAL EDUCATION AND THE AMA PHYSICIAN'S RECOGNITION AWARD.

PRESCOTT VETERANS ADMINISTRATION CENTER CONTINUING MEDICAL EDUCATION PROGRAM

October 1974

1:30 p.m. Bldg. 28, VAC Prescott, AZ

October 3 — National Antibiotic Test
October 10 — Cardiology Conference
October 17 — Medical Grand Rounds
October 24 — Insulin Resistance

SPONSOR: Veterans Administration

CONTACT:

Charles A. Trahern, M.D.
Coordinator, Continuing
Medical Education
Veterans Administration Center
Prescott, AZ 86301

Approved for 1½ required hours per session toward the ArMA Certificate in Continuing Medical Education.

PROBLEM ORIENTED FAMILY PRACTICE REVIEW COURSE

October 10-13, 1974

SPONSOR: Dept. of Family & Community Medicine
U of A College of Medicine
Tucson, AZ 85724

CONTACT:

Anthony F. Vuturo, M.D.
Dept. of Family & Community Medicine
U of A College of Medicine
Tucson, AZ 85724

Approved for 30 required hours toward the ArMA Certificate in Continuing Medical Education.

SCOTTSDALE MEMORIAL HOSPITAL SEMINAR #8

October 12, 1974
The Homestead, Scottsdale, AZ

SPONSOR: Scottsdale Memorial Hospital

CONTACT:

Roger C. Wood, M.D.
7300 E. 4th Street
Scottsdale, AZ

Approved for 8 required hours toward the ArMA Certificate in Continuing Medical Education.

POST-CONFERENCE — TRAVEL STUDY PROGRAM

October 14-18, 1974
Guadalajara Hilton
Guadalajara, Sonora, Mexico

SPONSOR: Dept. of Family & Community Medicine
U of A College of Medicine
Tucson, AZ 85724

CONTACT:

Anthony F. Vuturo, M.D.
Dept. of Family & Community Medicine
U of A College of Medicine
Tucson, AZ 85724

Approved for 18 required hours toward the ArMA Certificate in Continuing Medical Education.

ARTHRITIS SERVICES PROGRAM

October 26, 1974
Arizona Medical Center, Tucson, AZ

SPONSOR: Arthritis Services Program

CONTACT:

Beth Ziebell
3813 E. 2nd St.
Tucson, AZ

Approved for 6 required hours toward the ArMA Certificate in Continuing Medical Education.

REGIONAL MEETING AMERICAN COLLEGE OF PHYSICIANS

November 1, 2, 1974
Camelback Inn, Phoenix, Arizona

SPONSOR: Arizona Chapter, American College of Physicians

CONTACT:

E. B. Waldmann, M.D.
350 W. Thomas Road
Phoenix, AZ 85013
Ashton B. Taylor, M.D.
444 W. Osborn Road
Phoenix, AZ 85013

Approved for 9 required hours toward the ArMA Certificate in Continuing Medical Education.

**PRESCOTT VETERANS ADMINISTRATION
CENTER CONTINUING MEDICAL
EDUCATION PROGRAM**

November 1974

1:30 p.m. Bldg. 28, VAC Prescott, AZ

November 7 — Clinical Pharmacology Conference on Antibiotics

November 14 — Neurology Conference

November 21 — Medical Grand Rounds

SPONSOR: Veterans Administration

CONTACT:

Charles Trahern, M.D.
Coordinator, Continuing
Medical Education
Veterans Administration Center
Prescott, AZ 86301

Approved for 1½ required hours per session toward the ArMA Certificate in Continuing Medical Education.

THE GALLBLADDER, LIVER AND PANCREAS

8 a.m. to 5 p.m., November 2, 1974
Maricopa County General Hospital

SPONSOR: Maricopa County General Hospital

CONTACT:

Marcy L. Sussman, M.D., Chairman
Alex Newman, M.D.
Dept. of Radiology
Maricopa County General Hospital
2601 E. Roosevelt
Phoenix, AZ 85008

Approved for 8 required hours toward the ArMA Certificate in Continuing Medical Education.

**MANAGEMENT OF ACUTE SPINAL
CORD INJURIES**

November 6-8, 1974
Safari Convention Center
Scottsdale, AZ

SPONSOR: American Academy of Orthopedic Surgeons

CONTACT:

John S. Young, M.D.
Good Samaritan Hospital
1033 E. McDowell Rd.
Phoenix, AZ 85006

Approved for 18 required hours toward the ArMA Certificate in Continuing Medical Education.

**22nd ANNUAL MEETING OF THE MEDICAL
SOCIETY OF THE UNITED STATES AND MEXICO**

November 6-9, 1974
Guadalajara, Jalisco, Mexico

SPONSOR: Medical Society of USA & Mexico

CONTACT:

Lucy A. Verneti, M.D.
333 West Thomas Rd., #207
Phoenix, AZ 85013

Approved for 12 required hours toward the ArMA Certificate in Continuing Medical Education.

**WORKSHOP ON THE PROBLEM ORIENTED
MEDICAL RECORD AND QUALITY
ASSESSMENT IN HEALTH CARE**

November 7-8, 1974
Tucson Veterans Administration Hospital
Tucson, AZ

SPONSOR: University of Arizona College of Medicine

CONTACT:

William F. Denny, M.D.
V. A. Hospital
Tucson, AZ 85723

Approved for 14 required hours toward the ArMA Certificate in Continuing Medical Education.

**THE IMPACT OF AMBULATORY SURGICAL
CARE ON THE HEALTH CARE DELIVERY
SYSTEM**

November 8-9, 1974
Del Webb's TowneHouse, Phoenix, AZ

SPONSOR: Society for the Advancement of Free Standing Ambulatory Surgical Care

CONTACT:

Boyden L. Crouch, M.D.
1040 E. McDowell Road
Phoenix, AZ 85006

Approved for 10 required hours toward the ArMA Certificate in Continuing Medical Education.

**ARIZONA CHAPTER, AMERICAN ACADEMY
OF PEDIATRICS**

November 30-December 1, 1974
Tucson, AZ

SPONSOR: Arizona Chapter, American Academy of Pediatrics

CONTACT:

James W. LaBelle, M.D.
2222 N. Craycroft Rd.
Tucson, AZ 85712

PHYSICIAN EDUCATION PROGRAM IN FAMILY PLANNING

Univ. of California, Los Angeles, CA
December 2-6, 1974

SPONSOR: DHEW And UCLA Center For
Health Sciences

CONTACT:

Irvin M. Cushner, M.D.
Ob/Gyn Department
UCLA Center for Health Sciences
Los Angeles, CA 90024
Tel: (213) 825-1046

BASIC CONCEPTS IN CORONARY CARE FOR THE FAMILY PRACTITIONER

December 5, 6, 7, 1974
Arizona Medical Center, Tucson, AZ

SPONSOR: University of Arizona College of
Medicine

CONTACT:

Dr. Frank Marcus
Arizona Medical Center
Tucson, AZ 85724

Approved for 20 required hours toward the ArMA Certificate
in Continuing Medical Education.

THE ANNUAL SURGICAL CONFERENCE

December 6 and 7, 1974
Scottsdale Hilton Hotel, Scottsdale, AZ

SPONSOR: Arizona Chapter of the American
College of Surgeons

CONTACT:

Stephen Flynn, M.D.
3308 N. 3rd Ave., Suite 4
Phoenix, AZ 85013

THIRD ANNUAL SURGICAL SYMPOSIUM

January 19, 24, 1975
Sheraton Scottsdale, Scottsdale, AZ

SPONSOR: Phoenix Surgical Society, Tucson
Surgical Society and U of A
College of Medicine

SPONSOR:

Phillip Saba, M.D.
4550 North 51st Ave.
Phoenix, AZ 85031

Approved for 2B required hours toward the ArMA Certificate
in Continuing Medical Education.

EIGHTEENTH ANNUAL CARDIAC SYMPOSIUM

January 24, 25, 1975
Scottsdale Hilton Inn, Scottsdale, AZ

SPONSOR: American Heart Association,
Arizona Affiliate

CONTACT:

Brendan Phibbs, M.D.
1720 East McDowell Road
Phoenix, AZ 85006

Approved for 12 required hours toward the ArMA Certificate
in Continuing Medical Education.

SECOND ANNUAL SYMPOSIUM BARROW NEUROLOGICAL INSTITUTE

January 23-25, 1974
Camelback Inn, Scottsdale, AZ

SPONSOR: The Barrow Neurological Institute
of St. Joseph's Hospital & Medical Center

CONTACT:

Richard A. Thompson, M.D.
Division of Neurology
Barrow Neurological Institute
St. Joseph's Hospital Medical Center
350 W. Thomas Road
Phoenix, AZ 85013

Approved for 15 required hours toward the ArMA Certificate
in Continuing Medical Education.

FRONTIERS IN OPHTHALMOLOGY

February 6, 7, 8, 1975
Scottsdale Hilton, Scottsdale, AZ

SPONSOR: Rockefeller & Abbie Prentice
Eye Institute of St. Luke's
Hospital Medical Center

CONTACT:

Louis Rosenbaum, M.D.
500 E. Thomas Road
Phoenix, AZ 85012

Approved for 18 required hours toward the ArMA Certificate
in Continuing Medical Education.

ARTHRITIS SERVICES PROGRAM

March 29, 1975, 9 a.m. - 4 p.m.
Arizona Medical Center, Tucson, AZ

SPONSOR: Arthritis Services Program,
U of A College of Medicine

CONTACT:

Beth Ziebell
3B13 E. 2nd St.
Tucson, AZ

Approved for 6 required hours toward the ArMA Certificate
in Continuing Medical Education.

**ARIZONA MEDICAL ASSOCIATION
84TH ANNUAL MEETING**

April 22-26, 1975

Braniff Place Hotel and Tucson Community Center
Tucson, AZ

SPONSOR: Arizona Medical Association and
Northwestern University

CONTACT:
Donald J. Ziehm, M.D.
Program Director
Arizona Medical Association
810 W. Bethany Home Rd.
Phoenix, AZ 85013

BI-MONTHLY MEDICAL EDUCATION SEMINAR

Every other Wed. AM
Begin 7/3/74

Maryvale Samaritan Hospital, Phoenix, AZ

SPONSOR: Medical Staff Maryvale Hospital

CONTACT:
Thomas J. Groves, M.D.
6037 W. Elm St.
Phoenix, AZ 85033

Approved for 1 required hour per session toward the ArMA
Certificate in Continuing Medical Education.

VECTORCARDIOGRAPHY — A BASIC WORKSHOP

April 30-May 2, 1975

Good Samaritan Hospital, Phoenix, AZ

SPONSOR: American College of Cardiology,
Institute for Cardiovascular
Diseases, Good Samaritan Hospital

CONTACT:
Alberto Benchimol, M.D.
Institute for Cardiovascular Diseases
1033 E. McDowell Rd.
Phoenix, AZ

CAMELBACK HOSPITAL CLINICAL CONFERENCE

3rd Tuesday monthly
Camelback Hospital, Phoenix, AZ

SPONSOR: Camelback Hospital

CONTACT:
Stuart M. Gould, Jr., M.D.
Medical Director
Camelback Hospital
5055 N. 34th St.
Phoenix, AZ 85018

Approved for 1 elective hour per session toward the ArMA
Certificate in Continuing Medical Education.

**PHOENIX PSYCHIATRIC COUNCIL
CONTINUING EDUCATION PROGRAM**

September 1974 — May 1975
Arizona Medical Association Offices
810 W. Bethany Home Rd.
Phoenix, AZ 85013

SPONSOR: Phoenix Psychiatric Council

CONTACT:
Robert H. Barnes, M.D.
525 N. 18th St.
Phoenix, AZ 85006

Approved for 2 required hours per session toward the ArMA
Certificate in Continuing Medical Education.

**PHYSICIANS TRAINING PROGRAM AS
PART OF ARTHRITIS SERVICES PROGRAM**

July 1, 1974 - June 30, 1975
Arizona Medical Center, Tucson, AZ

SPONSOR: Arizona Medical Center and
Arthritis Services Program

CONTACT:
Beth Ziebell
3813 E. 2nd St.
Tucson, AZ

Approved for 40 required hours toward the ArMA Certificate
in Continuing Medical Education.

PATIENT STAFFING CONFERENCE

Three times weekly
Camelback Hospital, Phoenix, AZ

SPONSOR: Camelback Hospital

CONTACT:
Stuart M. Gould, Jr., M.D.
Medical Director
Camelback Hospital
5055 N. 34th St.
Phoenix, AZ 85018

Approved for 1 elective hour per conference toward the ArMA
Certificate in Continuing Medical Education.

MORBIDITY & MORTALITY CONFERENCE

2nd Monday, Monthly, 12:45 p.m.
Scottsdale Memorial Hospital, Scottsdale, AZ

SPONSOR: Medical Staff

CONTACT:

R. C. Good, M.D.
Dir. Medical Education
7300 E. 4th St.
Scottsdale, AZ

Approved for 1 elective hour per conference toward the ArMA Certificate in Continuing Medical Education.

CLINICAL PATHOLOGICAL CONFERENCE

4th Monday, Monthly, 12:45 p.m.
Scottsdale Memorial Hospital, Scottsdale, AZ

SPONSOR: Medical Staff

CONTACT:

R. C. Good, M.D.
Director of Medical Education
7300 E. 4th St.
Scottsdale, AZ

Approved for 1 elective hour per conference toward the ArMA Certificate in Continuing Medical Education.

MEDICAL GRAND ROUNDS

3rd Monday, Monthly, 12:45 p.m.
Scottsdale Memorial Hospital, Scottsdale, AZ

SPONSOR: Medical Staff

CONTACT:

R. C. Good, M.D.
Dir. of Medical Education
7300 E. 4th St.
Scottsdale, AZ

Approved for 1 elective hour per conference toward the ArMA Certificate in Continuing Medical Education.

FAMILY PRACTICE CONFERENCE

1st Monday, Monthly, 12:45 p.m.
Scottsdale Memorial Hospital, Scottsdale, AZ

SPONSOR: Medical Staff

CONTACT:

R. C. Good, M.D.
Dir. of Medical Education
7300 E. 4th St.
Scottsdale, AZ

Approved for 1 elective hour per conference toward the ArMA Certificate in Continuing Medical Education.

SURGICAL GRAND ROUNDS 4TH TUESDAY OF EACH MONTH

Hospital Auditorium
Baptist Hospital, Phoenix

SPONSOR: Baptist Hospital Phoenix

CONTACT:

James B. Shields, M.D.
6036 N. 19th Ave.
Phoenix, AZ 85015

Approved for 1½ required hours per month toward the ArMA Certificate in Continuing Medical Education.

CARDIOLOGY CONFERENCE

Weekly — Friday 8-9 a.m.
St. Mary's Hospital Auditorium
Tucson, AZ

SPONSOR: St. Mary's Hospital

CONTACT:

A. L. Forte, M.D.
St. Mary's Hospital
Tucson, AZ 85724

Approved for one required hour toward the ArMA Certificate in Continuing Medical Education.

PROBLEM CASE WORKSHOPS

3rd Monday of each month 7:30 a.m.
Room 4410, Arizona Medical Center, Tucson, AZ

SPONSOR: Division of Ophthalmology, U of A
College of Medicine

CONTACT:

H. E. Cross, M.D., Ph.D.
Arizona Medical Center
Dept. of Surgery
Tucson, AZ

Approved for 2 required hours toward the ArMA Certificate in Continuing Medical Education.

CLINICAL CANCER CONFERENCE

3rd Wednesday Every Month
Butler Bldg. Conference Room
Good Samaritan Hospital, Phoenix, AZ

SPONSOR: Good Samaritan Hospital

CONTACT:

John A. Bruner, M.D.
926 E. McDowell Road
Phoenix, AZ 85006

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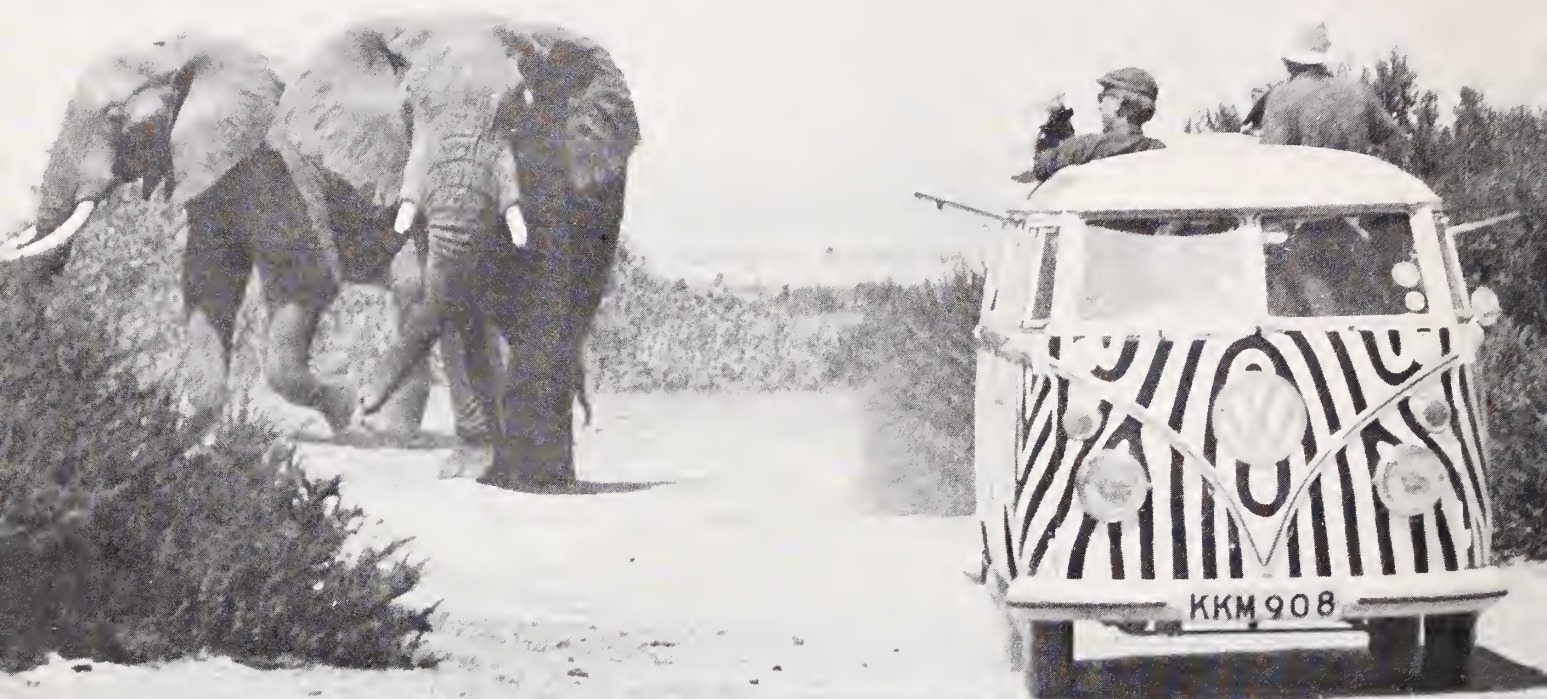
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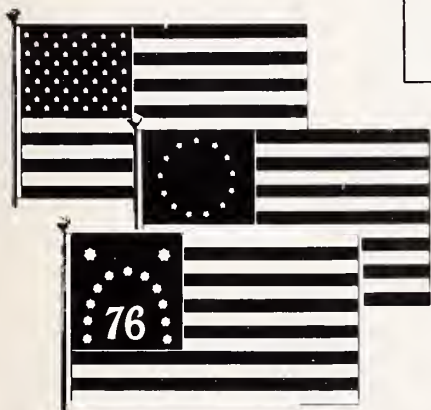
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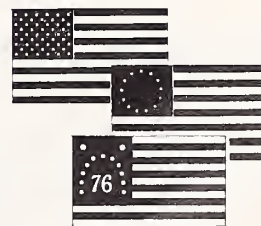
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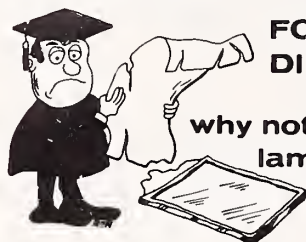
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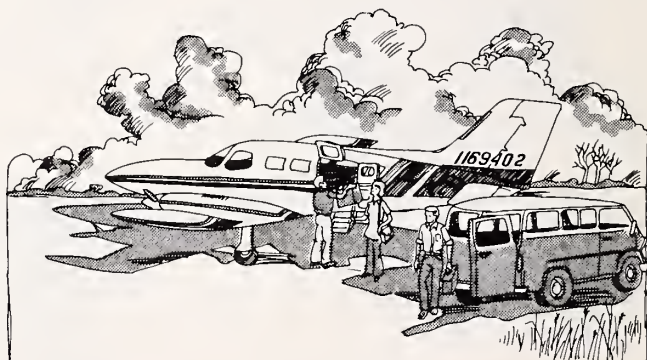
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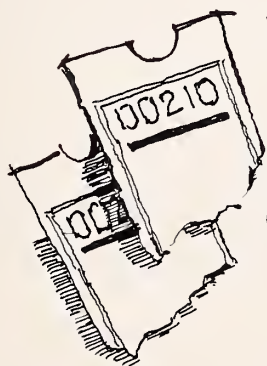


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1. Demeulenaere, L.: Action du R 1132 sur le transit gastro-intestinal, *Acta Gastroent. Belg.* 21:674-680 (Sept.-Oct.) 1958.



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Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor

neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive dis-

orders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful

respond to one

According to her major symptoms, she is a psychoneurotic patient with severe anxiety. But according to the description she gives of her feelings, part of the problem may sound like depression. This is because her problem, though primarily one of excessive anxiety, is often accompanied by depressive symptomatology. Valium (diazepam) can provide relief for both—as excessive anxiety is relieved, the depressive symptoms associated with it are also relieved.

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Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.

For further information on this subject, the following references are provided:

1. Henry BW, *et al*: *Dis Nerv Syst* 30:675-679, Oct 1969.
2. Hollister LE, *et al*: *Arch Gen Psychiatry* 24:273-278, Mar 1971.
3. Claghorn J: *Psychosomatics* 11:438-441, Sept-Oct 1970.

surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of child-bearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies.

Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle



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spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.



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Saturated	2 grams
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MEDICAL SOCIETY OF THE UNITED STATES AND MEXICO

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The more physicians consider the hemodynamics of lowering blood pressure...

Most physicians now agree on the importance of reducing blood pressure in the hypertensive patient. But high blood pressure exists, of course, only as part of a complete clinical picture. The hemodynamic profile of well-established essential hypertension is characterized by elevated arterial blood pressure, normal cardiac output, and increased total peripheral resistance.

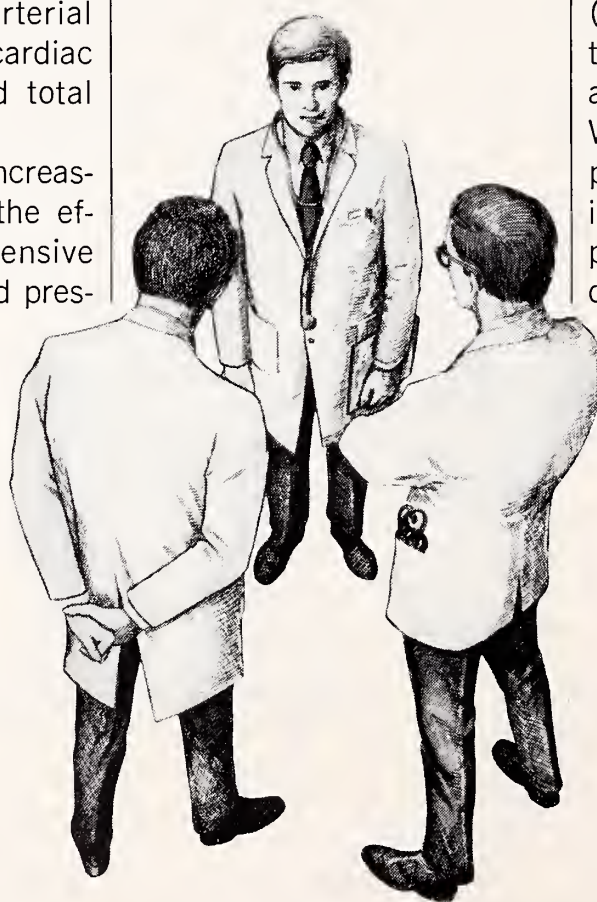
And so, physicians are increasingly concerned with the effects of an antihypertensive agent not only on blood pres-

sure itself but also on the hemodynamic pattern—in short, with the total effect of the drug. *Does it indeed help lower blood pressure effectively? Is peripheral resistance reduced? Are cardiac output and renal functions main-*

tained? And, also, is there likely to be drug-induced postural hypotension serious enough to pose a threat to the patient's cerebrovascular status?

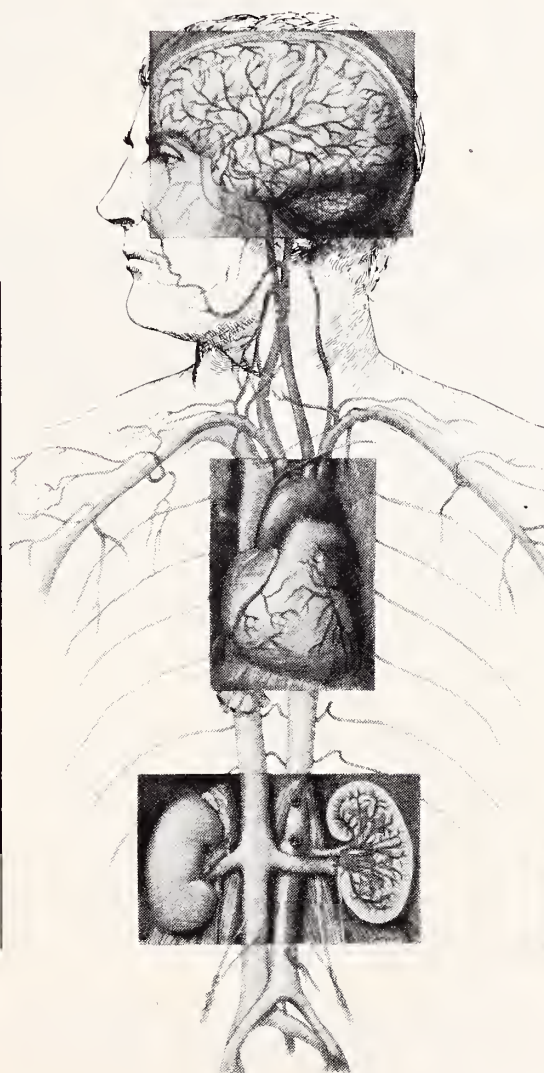
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the more physicians rely on this unique antihypertensive

lowering blood pressure. But there are other considerations as well. Cardiac output is usually maintained with no cardiac acceleration; in some patients the heart rate is actually slowed. Peripheral resistance is apparently reduced. ALDOMET does not usually compromise existing renal function; it generally does not reduce renal blood flow, glomerular filtration rate, or filtration fraction. And ALDOMET usually does not cause symptomatic postural or exercise hypotension.



Contraindications include active hepatic disease and known sensitivity to the drug. Use with caution in patients with a history of liver disease or dysfunction. Not recommended in pheochromocytoma or pregnancy.

It is important to recognize that a positive Coombs test, hemolytic anemia, and liver disorders may occur with methyldopa therapy. The rare occurrences of hemolytic anemia or liver disorders could lead to potentially fatal complications unless properly recognized and managed. For more details see the brief summary of prescribing information.

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smoothly lowers blood pressure

Contraindications: Active hepatic disease, such as acute hepatitis and active cirrhosis. Known sensitivity. Not recommended in pheochromocytoma. Unsuitable in mild or labile hypertension responsive to mild sedation or thiazide therapy. Use cautiously in patients with history of previous liver disease or dysfunction.

Warnings: It is important to recognize that a positive Coombs test, hemolytic anemia, and liver disorders may occur with methyldopa therapy. The rare occurrences of hemolytic anemia or liver disorders could lead to potentially fatal complications unless properly recognized and managed. Read this section carefully to understand these reactions.

With prolonged methyldopa therapy, 10% to 20% of patients develop a positive direct Coombs test, usually between six and twelve months of therapy. Lowest incidence is at daily dosage of 1 g or less. This on rare occasions may be associated with hemolytic anemia, which could lead to potentially fatal complications. One cannot predict which patients with a positive direct Coombs test may develop hemolytic anemia. Prior existence or development of a positive direct Coombs test is not in itself a contraindication to use of methyldopa. If a positive Coombs test develops during methyldopa therapy, determine whether hemolytic anemia exists and whether the positive Coombs test may be a problem. For example, in addition to a positive direct Coombs test there is less often a positive indirect Coombs test which may interfere with cross matching of blood.

At the start of methyldopa therapy, it is desirable to do a blood count (hematocrit, hemoglobin, or red cell count) for a baseline or to establish whether there is anemia. Periodic blood counts should be done during therapy to detect hemolytic anemia. It may be useful to do a direct Coombs test before therapy and at six and twelve months after the start of therapy. If Coombs-positive hemolytic anemia occurs, the cause may be methyldopa and the drug should be discontinued. Usually the anemia remits promptly. If not, corticosteroids may be given and other causes of anemia should be considered. If the hemolytic anemia is related to methyldopa, the drug should not be reinstituted. When methyldopa causes Coombs positivity alone or with hemolytic anemia, the red cell is usually coated with gamma globulin of the IgG (gamma G) class only. The positive Coombs test may not revert to normal until two to months after methyldopa is stopped.

Should the need for transfusion arise in a patient receiving methyldopa, both a direct and an indirect Coombs test should be performed on his blood. In the absence of hemolytic anemia, usually only the direct Coombs test will be positive. A positive direct Coombs test alone will not interfere with typing or cross matching. If the indirect Coombs test is also positive, problems may arise in the major cross match and the assistance of a hematologist or transfusion expert will be needed.

Fever has occurred within first three weeks of therapy, sometimes with eosinophilia or abnormalities in liver function tests, such as serum alkaline phosphatase, serum transaminases (SGOT, SGPT), bilirubin, cephalin cholesterol flocculation, prothrombin time, and bromsulphalein retention. Jaundice, with or without fever, may occur, with onset usually in the first two to three months of therapy. Rarely fatal hepatic necrosis has been reported. These hepatic changes may represent hypersensitivity reactions; periodic determination of hepatic function should be done particularly during the first six to twelve weeks of therapy or

whenever an unexplained fever occurs. If fever, abnormalities in liver function tests, or jaundice appear, stop therapy with methyldopa. If caused by methyldopa, the temperature and abnormalities in liver function characteristically have reverted to normal when the drug was discontinued. Methyldopa should not be reinstituted in such patients.

Rarely, reversible reduction in leukocyte count with primary effect on granulocytes has been seen. Reversible thrombocytopenia has occurred rarely. When used with other antihypertensive drugs, potentiation of antihypertensive effect may occur.

Use in Pregnancy and Childbearing Age—Not recommended in pregnancy. In women of childbearing age, weigh potential benefits against possible fetal hazards.

Precautions: Methyldopa may interfere with measurement of: uric acid by the phosphotungstate method, creatinine by the alkaline picrate method, and SGOT by colorimetric methods. Since methyldopa causes fluorescence in urine samples at the same wavelengths as catecholamines, spuriously high levels of urinary catecholamines may be reported. This will interfere with the diagnosis of pheochromocytoma. Stop drug if involuntary choreoathetotic movements occur in patients with severe bilateral cerebrovascular disease. Patients may require reduced doses of anesthetics; hypotension occurring during anesthesia usually can be controlled with vasopressors. Hypertension has occurred after dialysis in patients on methyldopa because the drug is removed by this procedure.

Adverse Reactions: Sedation, usually transient, may be seen during initial therapy or when dosage is increased. Headache, asthenia, or weakness may be noted as early, transient symptoms. Symptoms associated with effective lowering of blood pressure are occasionally seen and include dizziness, lightheadedness, and symptoms of cerebrovascular insufficiency. Angina pectoris may be aggravated. Symptoms of orthostatic hypotension may occur; if symptoms occur, reduction of dosage is suggested. Bradycardia, nasal stuffiness, mild dryness of mouth, and gastrointestinal symptoms including distention, constipation, flatulence, and diarrhea occur occasionally; these generally can be relieved by reducing dosage. Nausea and vomiting have been reported in only a few patients. Sore tongue or "black tongue," pancreatitis, and inflammation of salivary glands may occur.

Weight gain and edema occur infrequently and are relieved by administering a thiazide diuretic; if edema progresses or signs of pulmonary congestion appear, discontinue drug. A rise in BUN has been observed. Other rare reactions include breast enlargement, lactation, impotence, decreased libido, skin rash, mild arthralgia, myalgia, paresthesias, Bell's palsy, parkinsonism, psychic disturbances including nightmares, reversible mild psychoses or depression. Urine exposed to air after voiding may darken because of breakdown of methyldopa or its metabolites.

Note: Dosage should be limited initially to 500 mg daily when following previous antihypertensive agents other than thiazides. Maximal recommended daily dose is 3.0 g. Patients with impaired renal function may respond to smaller doses than patients with normal kidney function. Syncope in older patients has been related to increased sensitivity in those with advanced arteriosclerotic vascular disease; this may be avoided by lower doses. Tolerance occasionally seen either early or late, but more likely between second and third month after initiation of therapy; increased dosage or combined therapy with a thiazide frequently restores effective control.

How Supplied: Tablets, containing 250 mg methyldopa each, in single-unit packages of 100 and bottles of 100 and 1000; Tablets, containing 500 mg methyldopa each, in single-unit packages of 100 and bottles of 100.

For more detailed information, consult your MSD representative or see full prescribing information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

MS
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addendum

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"A.H. Robins asked me to compare the banana flavor of their Donnagel®-PG with the real thing and, by jove, I couldn't tell the difference. Not even in sip-by-sip comparison. Amazing!"

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A. H. Robins Company, Richmond, Virginia 23220

Donnagel®-PG. ©

Donnagel with paregoric equivalent
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Kaolin	6.0g.
Pectin	142.8mg
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Atropine sulfate	0.0194 mg
Hyoscine hydrobromide	0.0065 mg
Powdered opium, USP.	24.0mg.
(equivalent to paregoric 6 ml.) (warning: may be habit forming)	
Sodium benzoate.	60.0 mg.
(preservative)	
Alcohol, 5%	

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Fall and winter coughs are back. Time to help clear the lower respiratory tract with the five Robitussins and Cough Calmers. All contain glyceryl guaiacolate, the efficient expectorant that works systemically to help increase the output of lower respiratory tract fluid. The enhanced flow of less viscid secretions soothes the tracheo-bronchial mucosa, promotes ciliary action, and makes thick, inspissated mucus less viscid and easier to raise. Available on your prescription or recommendation.

For unproductive coughs

ROBITUSSIN[®]

Each 5 cc. contains:
Glyceryl guaiacolate 100 mg.
Alcohol, 3.5%

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(warning: may be habit forming)
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Non-narcotic for 6-8 hr. cough control

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Robitussin-DM in solid form for "coughs on the go"

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Clears nasal and sinus passages as it relieves coughs

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Comprehensive decongestant action helps control cough and clear stuffy nose and sinuses. Non-narcotic.

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ROBITUSSIN-DM [®]					
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Address all correspondence to the
Journal Offices

810 W. Bethany Home Rd.,
Phoenix, Arizona 85013

Bruce E. Robinson
Business Manager

National Representative
Medical Journals West
Melvin B. Tyler, Western Representative
731 Market Street
San Francisco, California 94103

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Material submitted for publication in ARIZONA MEDICINE should conform to the following policies:

1. Manuscripts, including references or bibliography, should be typewritten, double-spaced, on one side of the paper only, and the original and a carbon enclosed.

2. Be guided by the general rules of medical writing as followed by the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

3. Although the Editors try to catch inaccuracies, the ultimate responsibility is the author's.

4. Articles are accepted for publication only if they are contributed exclusively to this Journal. Ordinarily, contributors will be notified within 60 days if a manuscript is accepted for publication. Every effort will be made to return unused manuscripts.

5. The Journal reserves the right to edit all material.

6. Reprints will be supplied to the author at printing cost.

Rondomycin[®]

(methacycline HCl)

CONTRAINDICATIONS: Hypersensitivity to any of the tetracyclines.

WARNINGS: Tetracycline usage during tooth development (last half of pregnancy to eight years) may cause permanent tooth discoloration (yellow-gray-brown), which is more common during long-term use but has occurred after repeated short-term courses. Enamel hypoplasia has also been reported. **Tetracyclines should not be used in this age group unless other drugs are not likely to be effective or are contraindicated. Usage in pregnancy.** (See above **WARNINGS** about use during tooth development.)

Animal studies indicate that tetracyclines cross the placenta and can be toxic to the developing fetus (often related to retardation of skeletal development). Embryotoxicity has also been noted in animals treated early in pregnancy.

Usage in newborns, infants, and children. (See above **WARNINGS** about use during tooth development.)

All tetracyclines form a stable calcium complex in any bone-forming tissue. A decrease in fibula growth rate observed in prematures given oral tetracycline 25 mg/kg every 6 hours was reversible when drug was discontinued.

Tetracyclines are present in milk of lactating women taking tetracyclines.

To avoid excess systemic accumulation and liver toxicity in patients with impaired renal function, reduce usual total dosage and, if therapy is prolonged, consider serum level determinations of drug. The anti-anabolic action of tetracyclines may increase BUN. While not a problem in normal renal function, in patients with significantly impaired function, higher tetracycline serum levels may lead to azotemia, hyperphosphatemia, and acidosis.

Photosensitivity manifested by exaggerated sunburn reaction has occurred with tetracyclines. Patients apt to be exposed to direct sunlight or ultraviolet light should be so advised, and treatment should be discontinued at first evidence of skin erythema.

PRECAUTIONS: If superinfection occurs due to overgrowth of nonsusceptible organisms, including fungi, discontinue antibiotic and start appropriate therapy.

In venereal disease, when coexistent syphilis is suspected, perform darkfield examination before therapy, and serologically test for syphilis monthly for at least four months.

Tetracyclines have been shown to depress plasma prothrombin activity; patients on anticoagulant therapy may require downward adjustment of their anticoagulant dosage.

In long-term therapy, perform periodic organ system evaluations (including blood, renal, hepatic).

Treat all Group A beta-hemolytic streptococcal infections for at least 10 days.

Since bacteriostatic drugs may interfere with the bactericidal action of penicillin, avoid giving tetracycline with penicillin.

ADVERSE REACTIONS: **Gastrointestinal** (oral and parenteral forms): anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis, inflammatory lesions (with monilial overgrowth) in the anogenital region.

Skin: maculopapular and erythematous rashes; exfoliative dermatitis (uncommon). Photosensitivity is discussed above (See **WARNINGS**).

Renal toxicity: rise in BUN, apparently dose related (See **WARNINGS**).

Hypersensitivity: urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus.

Bulging fontanels, reported in young infants after full therapeutic dosage, have disappeared rapidly when drug was discontinued.

Blood: hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia.

Over prolonged periods, tetracyclines have been reported to produce brown-black microscopic discoloration of thyroid glands; no abnormalities of thyroid function studies are known to occur.

USUAL DOSAGE: Adults—600 mg daily, divided into two or four equally spaced doses. More severe infections: an initial dose of 300 mg followed by 150 mg every six hours or 300 mg every 12 hours. Gonorrhea: In uncomplicated gonorrhea, when penicillin is contraindicated, 'Rondomycin' (methacycline HCl) may be used for treating both males and females in the following clinical dosage schedule: 900 mg initially, followed by 300 mg q.i.d. for a total of 5.4 grams.

For treatment of syphilis, when penicillin is contraindicated, a total of 18 to 24 grams of 'Rondomycin' (methacycline HCl) in equally divided doses over a period of 10-15 days should be given. Close follow-up, including laboratory tests, is recommended.

Eaton Agent pneumonia: 900 mg daily for six days.

Children—3 to 6 mg/lb/day divided into two to four equally spaced doses.

Therapy should be continued for at least 24-48 hours after symptoms and fever have subsided.

Concomitant therapy: Antacids containing aluminum, calcium or magnesium impair absorption and are contraindicated. Food and some dairy products also interfere. Give drug one hour before or two hours after meals. Pediatric oral dosage forms should not be given with milk formulas and should be given at least one hour prior to feeding.

In patients with renal impairment (see **WARNINGS**), total dosage should be decreased by reducing recommended individual doses or by extending time intervals between doses.

In streptococcal infections, a therapeutic dose should be given for at least 10 days.

SUPPLIED: 'Rondomycin' (methacycline HCl): 150 mg and 300 mg capsules; syrup containing 75 mg/5 cc methacycline HCl.

Before prescribing, consult package circular or latest PDR information.

Rev. 6/73



WALLACE LABORATORIES
CRANBURY, NEW JERSEY 08512



**When the focus is on bronchitis due to
susceptible strains of *H. influenzae* and pneumococci***

Rondomycin[®] 300 mg.
[methacycline HCl] Capsules

Delivers from the very first dose:

**Studies show that after the first dose serum levels rapidly rise above
minimum *in vitro* inhibitory concentrations**

*Since many strains are known to be resistant, routine sensitivity testing is recommended.

The Role of the Detail Man

"I may be prejudiced, but I am very much in favor of the detail men I meet. Most of them are knowledgeable about the drugs they promote and can be a great help in acquainting me with new medication."

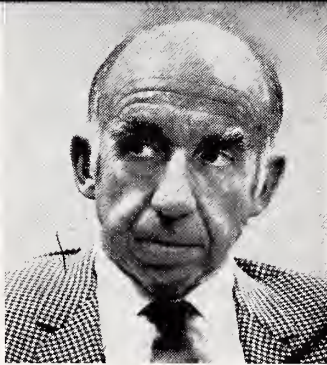
Family Physician's Perception

I think that most general practitioners in this area feel as I do about the detail man. Over the years I have gotten to know most of the men who visit me regularly and they in turn have become aware of my particular interests and the nature of my practice. They, therefore, limit their discussion as much as possible to the areas of interest to me. Since I usually see the same representative again in future visits, it is in his best interest to supply me with the most honest, factual, as well as up-to-date information about his products.

Dr. Willard Gobbell
Family Physician
Encino, California



Dr. Jeremiah Stamler
Chairman
Department of Community
Health and Preventive
Medicine, and Dingman
Professor of Cardiology
Northwestern University
Medical School



"In the total picture of dealing with health problems in this country there is a potential for detail men to play a meaningful role."

The Positive Influence

My contact with representatives and salesmen of the pharmaceutical industry is the type of contact that people in a medical center, research people, and academic people have and that's in all likelihood on a somewhat different level from that of the practicing physician.

Let me touch on how I personally perceive the role of the sales representative. These men reach large numbers of health professionals. Thus they could be—and at times actually are—disseminators of useful information. They could consistently serve a real educational function in their ability to discuss their products.

At present they do distribute printed material, brochures and pamphlets—some of it scientifically sound and therefore truly useful—as well as some excellent films produced by the pharmaceutical industry. When they function in the

Opinion
&
Dialogue

Is He a Source of Information?

Yes, with certain reservations. The average sales representative has a great fund of information about the drug products he is responsible for. He is usually able to answer most questions fully and intelligently. He can also supply reprints of articles that contain a great deal of information. Here, too, I exercise some caution. I usually accept most of the statements and opinions that I find in the papers and studies which come from the larger teaching facilities. It goes without saying that a physician should also rely on other sources for his information on pharmacology.

Training of Sales Representatives

Ideally, a candidate for the position as a sales representative of a pharmaceutical company should be a graduate pharmacist who has a questioning mind. I don't think this is possible in every case, and so it becomes the responsibility

of the pharmaceutical company to train these individuals comprehensively. It is of very great importance that the detail man's knowledge of the product he represents be constantly reviewed as well as updated. This phase of the sales representative's education should be a major responsibility of the medical department of the pharmaceutical company.

I am certain that most of these companies take special care to give their detail men a great deal of information about the products they produce — information about indications, contraindications, side effects and precautions. Yet, although most of the detail men are well informed, some, unfortunately, are not. It might be helpful if sales representatives were reassessed every few years to determine whether or not they are able to fulfill their important function. Incidentally, I feel the same way about periodic assessments of everyone

in the health care field, whether they be general practitioners, surgeons or salesmen.

Value of Sampling

I personally am in favor of limited sampling. I do not use sampling in order to perform clinical testing of a drug. I feel that drug testing should rightly be left to the pharmacology researcher and to the large teaching institutions where such testing can be done in a controlled environment.

I do not use samples as a "starter dose" for my patients. I do, however, find samples of drugs to be of value in that they permit me to see what the particular medication looks like. I get to see the various forms of the particular medication at first hand, and if it is in a liquid form I take the time to taste it. In that way I am able to give my patients more complete information about the particular medications that I prescribe for them.

capacity they are indeed useful; particularly in the fact that they disseminate broadly based educational material and serve not just as "pushers" of their drugs.

The Other Side of the Coin

Obviously, the pharmaceutical companies are not producing all this material as a labor of love — they are in the business of selling products for profit. In this regard the ambitious and improperly motivated sales representative can exert a negative influence on the practicing physician, both by presenting a one-sided picture of his product, and by encouraging the practitioner to depend too heavily on drugs for his total therapy. In these ways, the salesman has often distorted objective reality and undermined his potential role as an educator.

The Industry Responsibility

Since the detail man must be an information resource as well as a representative of his particular pharmaceutical company, he should be carefully selected and

thoroughly trained. That training, perforce, must be an ongoing one. There must be a continuing battle within and with the pharmaceutical industry for high quality not only in the selection and training of its sales representatives, but also in the development of all of its promotional and educational material.

The industry must be ready to accept constructive as well as corrective criticism from experts in the field and consumer spokesmen, and be willing to accept independent peer review. The better educated and prepared the salesman is, the more medically accurate his materials, the better off the pharmaceutical industry, health professionals and the public—i.e., the patients—will be.

Physician Responsibility

The practicing physician is in constant need of up-dated information on therapeutics, including drugs. He should and does make use of drug information and answers to specific questions supplied by the pharmaceutical representative. However, that informa-

tion must not be his main source of continuing education. The practitioner must keep up with what is current by making use of scientific journals, refresher courses, and information received at scientific meetings.

The practicing physician not only has the right, but has the responsibility to demand that the pharmaceutical company and its representatives supply a high level of valid and useful information. I feel certain that if such a high level is demanded by the physician as well as the public, this demand will be met by an alert and concerned pharmaceutical industry.

From my experience, my impression is that sectors of the pharmaceutical industry are indeed ethical. I challenge the industry as a whole to live up to that word in its finest sense.



Sign of a cold* sufferer Time for Ornade®

Each Spansule® capsule contains 8 mg. Teldrin® (brand of chlorpheniramine maleate); 50 mg. phenylpropanolamine hydrochloride; 2.5 mg. isopropamide, as the iodide.

Fast relief of upper respiratory congestion and hypersecretion* with convenient b.i.d. dosage.

Before prescribing, see complete prescribing information in SK&F literature or PDR. The following is a brief summary

- * **Indications**
Based on a review of this drug by the National Academy of Sciences — National Research Council and/or other information, FDA has classified the indications as follows:
Possibly effective: For relief of upper respiratory tract congestion and hypersecretion associated with vasomotor rhinitis and allergic rhinitis, and for prolonged relief.
Lacking in substantial evidence of effectiveness: For relief of nasal congestion and hypersecretion associated with the common cold and sinusitis.
Final classification of the less-than-effective indications requires further investigation.

Contraindications: Hypersensitivity to any component; concurrent MAO inhibitor therapy; severe hypertension; bronchial asthma; coronary artery disease; stenosing peptic ulcer, pyloroduodenal or bladder neck obstruction. Children under 6.

Warnings: Caution patients about activities requiring alertness (e.g., operating vehicles or machinery). Warn patients of possible additive effects with alcohol and other CNS depressants.

Usage in Pregnancy: In pregnancy, nursing mothers and women who might bear children, weigh potential benefits against hazards. Inhibition of lactation may occur.

Effect on PBI Determination and I^{131} Uptake: Isopropamide iodide may alter PBI test results and will suppress I^{131} uptake. Substitute thyroid tests unaffected by exogenous iodides.

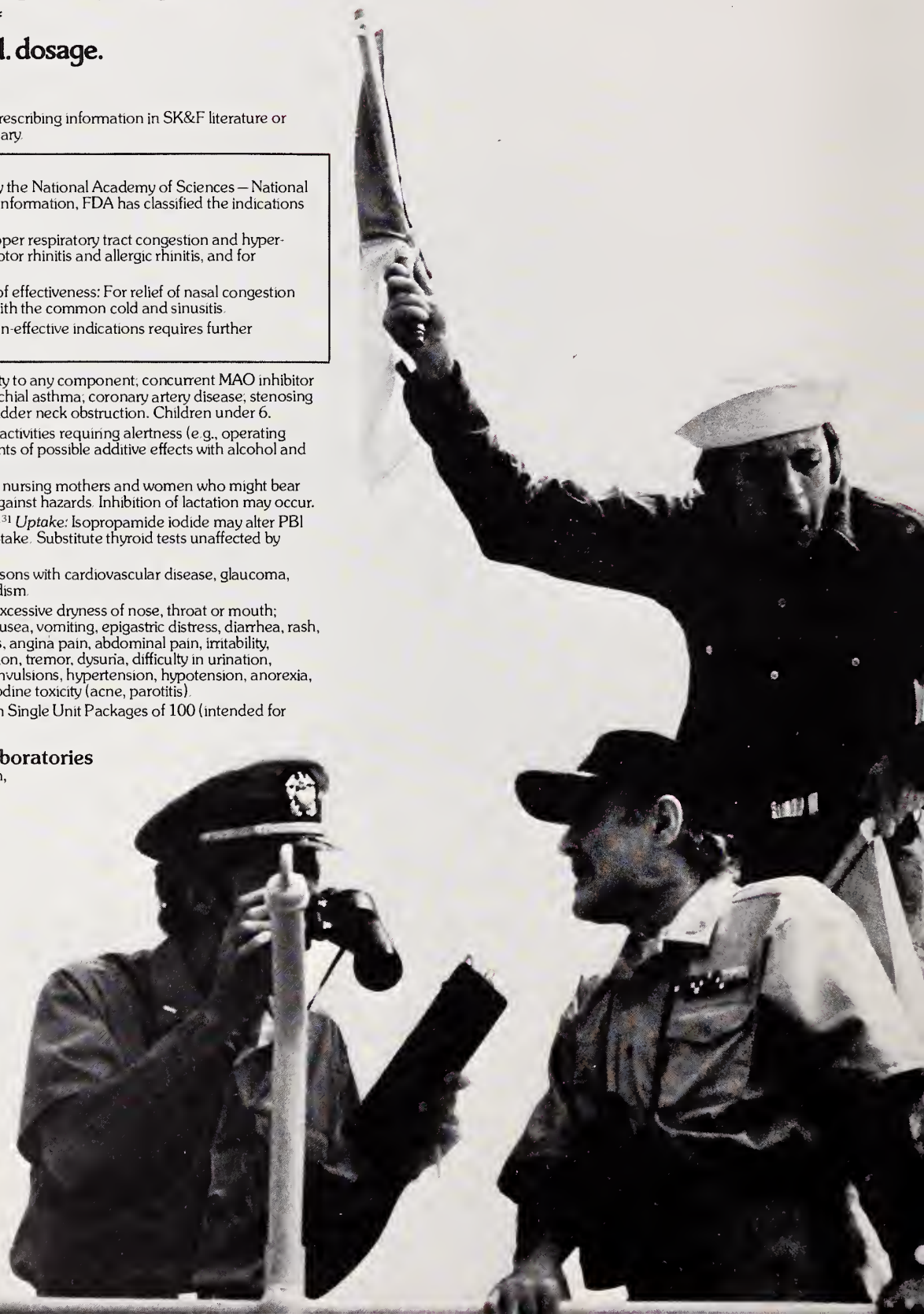
Precautions: Use cautiously in persons with cardiovascular disease, glaucoma, prostatic hypertrophy, hyperthyroidism.

Adverse Reactions: Drowsiness, excessive dryness of nose, throat or mouth; nervousness; or insomnia. Also, nausea, vomiting, epigastric distress, diarrhea, rash, dizziness, weakness, chest tightness, angina pain, abdominal pain, irritability, palpitation, headache, incoordination, tremor, dysuria, difficulty in urination, thrombocytopenia, leukopenia, convulsions, hypertension, hypotension, anorexia, constipation, visual disturbances, iodine toxicity (acne, parotitis).

Supplied: Bottles of 50 capsules; in Single Unit Packages of 100 (intended for institutional use only).

Smith Kline & French Laboratories

Division of SmithKline Corporation,
Philadelphia, Pa. 19101



A black and white photograph of a Native American-style beaded necklace. The necklace is made of dark and light beads in a repeating pattern, with several large, light-colored, star-shaped or sunburst-shaped pendants. A dark rectangular card with the words "NATIONAL CAR RENTAL" in a white oval logo is tucked into the center of the necklace. The necklace is laid out on a light-colored surface. Below the necklace, there is a dashed line and the text "I WANT A DISCOUNT CARD".

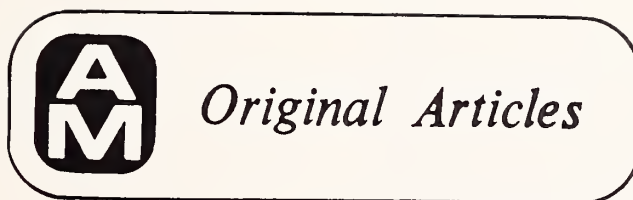
And remember, National Car Rental System is the only rental company that gives you S&H Green Stamps on all U.S. rentals. It's their way of saying "Thank you."

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400760



GASTRODUODENAL SURGERY

An Analysis of 404 Cases Treated In The Flagstaff Hospital

C. HERBERT FREDELL, M.D.

The author has presented a clinical analysis of gastroduodenal surgery done in the Flagstaff Hospital the last 10½ years. The results have been good, the mortality and morbidity rates acceptable and the variety of problems interesting.

Gastroduodenal surgical procedures have been performed in significant numbers in large and small hospitals alike. Most published reports of varied aspects of this type of surgery have originated from larger institutions. There has been a scarcity of reports that critically analyze results of gastroduodenal surgery done in smaller hospitals.^{4, 6, 7, 13, 14}

This paper is an analysis of a ten and a half year experience with gastroduodenal surgery in a small hospital. It is a study of the operative procedure performed, postoperative complications, length of hospital stay, antibiotic and blood utilization, and postoperative deaths. A review

is not done of published reports concerning gastroduodenal surgery. Salient references are cited concerning specific points in the paper.

Within the time of this study the gross postoperative death rate has declined significantly. The majority of the postoperative complications did not prolong the patients hospital stay. The complication rate and death rate was higher among those patients whose presenting complaint was upper gastrointestinal bleeding. Long term follow up was not possible therefore an accurate incidence of recurrent ulcerations was not obtained. An accurate follow up was possible with those patients who continued to reside in the community.

From: 120 W. Fine Ave., Flagstaff, Az. 86001 (Dr. Fredell).

MATERIALS AND METHODS

This analysis is a retrospective study of the hospital records and office records of the author for a period of time from 8-1-63 to 1-1-74. The surgical procedures were performed by three board certified general surgeons in the Flagstaff Hospital. The hospital is an acute care short stay community hospital. The bed capacity has increased from 50 to 115 beds during the period of this study.

The availability of gastric cytological examination, fiberoptic gastroesophagoscopy, and gastric biopsy have increased the accuracy of diagnosis of diseases of the esophagus and stomach during the recent 3 years of this study. Prior to this period there were instances when the primary indication for surgery was a radiological finding. At the time of surgery no demonstrable disease was found in some of those instances. Since 1970 this is an unusual circumstance. A tabulation of the endoscopic diagnoses made since 1970 is presented. (Table 1). When there has been doubt concerning the nature of peptic ulcer disease a preoperative gastric analysis was done however it has not been a routine preoperative test. Its limited prognostic value and lack of uniform reliability is well known.¹⁰

A tabulation of the postoperative diagnoses and the operative procedures was done. Tables 2 and 3). One notes from this table that the most common diagnosis was peptic ulcer disease

GASTRODUODENAL SURGERY		
Flagstaff Hospital 8-1-63 to 1-1-74		
<u>DIAGNOSIS AFTER GASTROESOPHAGOSCOPY</u>		
1. Normal (radiological abnormality) (14)		35
2. Esophagitis		13
3. Esophageal ulcer		1
4. Esophageal stricture		6
5. Esophageal carcinoma		3
6. Cardiospasm		1
7. Hiatus hernia		14
8. Mallory Weiss syndrome		3
9. Gastritis		19
10. Metreieres Disease		2
11. Gastric ulcer		11
12. Gastric polyp		1
13. Gastric carcinoma		6
14. Pylorospasm or Pyloric stenosis		2
15. Duodenal ulcer		3

TABLE 2
GASTRODUODENAL SURGERY
Flagstaff Hospital 8-1-63 to 1-1-74

Diagnosis	<u>Procedures</u>							
	Vagotomy Pylor.	GE	Gastrectomy Vagot.	Gastrot. Gastros.	Pyloro- plasty	Sut. myot.	Hiat Rep.	EX: GE
1. Diaph. Hernia	14						2	
c reflux	34						6	
c duod.ul.	37		1	1				
c Mall. Weiss	5				1			
c gast. ul.	4		2					(2)
2. Gastritis	3			2		7		
3. Gastric Ulcer								
intract.	10		5	7		1		1
bleed.	6		5	8			(3)	2
perf'n.				1			6	
4. Pyloric Mucosa prolapse					2			
5. Pyloric Stenosis					3*	17		
6. Gastric								
Polyp				1				
Leiomyoma				3				2
Lymphosarcoma				1				
Carcinoma				6	2			1

*--Adult

TABLE 3

GASTRODUODENAL SURGERY

Flagstaff Hospital 8-1-63 to 1-1-74

Procedures

Diagnosis	Vagotomy Pylor.	GE	Gastrectomy Vagot.	Gastrot. Gastros.	Pyloro- plasty	myot.	Sut.	Hiat Rep.	Ex.	GE
7. Duod. Ulcer										
intract.	59		4	2						1
bleed.	31	1	2	4	2					
perf'n.	14	1	1				8			
obstr'n.	6		1		2					1
8. Marginal Ulcer	2									
9. Duodenal Trauma							4			
10. Pancreas										
ectopia									2	
cyst				5						
carcinoma										1
11. Incidental or exploratory				33	2					

TABLE 4

GASTRODUODENAL SURGERY

Flagstaff Hospital 8-1-63 to 1-1-74

Indications for Blood Transfusion

		Diagnosis				
		Duod. Ul.	Gastric. Ul.	Gastritis	Tumor	Misc.
1. Acute Blood loss						
Preoperative	74	32	30	5	5	2
Intraoperative	19	6	6		7	
Postoperative	4	2	1	1		
2. Anemia						
Preoperative	7	1	3		3	
Postoperative	1		1			
3. Unspecified	4		1			
Total	109					

1. Due to operative accident
 3-Splenectomy in course
 1-Gastrostomy postop bleeding
2. When gastric procedure was incidental to
 other intraabdominal surgery 2

TABLE 5

GASTRODUODENAL SURGERY

Flagstaff Hospital 8-1-63 to 1-1-74

Indications for Reoperation Following Gastroduodenal Surgery

1. Recurrent ulceration	12	
Following-gastrectomy	3	Vagotomy 3
-gastroenterostomy	2	Vagotomy 2
-vagotomy & pyloroplasty	3	Gastrectomy 3
-application or excision	4	Gastrectomy 3
		Suture 1
2. Obstruction	7	
Following-gastroenterostomy	1	Enteroentero. 1
-vagotomy & pyloroplasty	6	Gastrectomy 3
		Gastroent. 3
3. Malignancy at margin of resection	1	Esophagogast. 1
		& Jejunal loop
4. Mallory Weiss syndrome	1	Vagotomy 1

of the stomach and duodenum. The coexistence of diaphragmatic hiatus hernia was found in a significant number of patients. Gastritis and pyloric stenosis were also common findings. There were nine patients with gastric carcinoma, one with lymphosarcoma, and five with leiomyoma that had surgical treatment. The miscellaneous tabulation includes those gastric surgical procedures that were done incidental to other intra abdominal surgery.

The surgical procedure most frequently done was a truncal vagotomy and pyloroplasty. Gastrectomy was done in relatively few patients with duodenal ulcer. The incidental tube gastrostomy was used following 225 operative procedures within the abdomen. All but 32 were gastroduodenal surgical procedures. Following the tube gastrostomy there have been two instances of removal that required reinsertion and one instance of bleeding from the gastrostomy site that required reoperation and suture of the stomach.

There were 237 males and 167 females. Approximately half of the patients were between 40 and 60 years of age. Eleven were over 80 and twenty were less than 9 years of age.

Blood utilization was studied from the preoperative through the postoperative period. In addition to the 41 patients with the presenting complaint of massive gastrointestinal bleeding there were 68 others that received blood. Among the 109 patients who received blood 49 received more than 4 units and 21 received more than 9 units. (Table 4).

The use of antibiotics was noted in 159 of the total patients. Concomitant use of antibiotics and blood administration was found in 81 of these patients. When a patient was ill enough to receive blood he was also a good candidate to receive antibiotics therapeutically or prophylactically.

There were 18 patients who required a secondary surgical procedure to treat their disease. Ten had the initial surgical procedure done in the Flagstaff Hospital. Recurrent ulceration, atony, or obstruction were the major indications for secondary surgery. Malfunction of a pyloroplasty was more common than organic obstruction when outlet difficulties occurred after vagotomy and pyloroplasty. Three patients needed a third surgical procedure to solve the postoperative problem. (Table 5). There were four deaths following surgery in this group of 18 patients.

Operative complications of significance were two esophageal lacerations requiring suture and 6 injured spleens that were removed. Complications of this type have been reported by Wirthlin and Malt.¹⁹

Postoperative complications have been moderate in number and varied in Type. Table 6). After discharge from the hospital additional postoperative complications became apparent. A group of 241 patients were followed by the author for at least a year postoperatively. The complications related to the surgical procedure were noted as late complications in Table 5.

The complication reported with greatest frequency was pulmonary atelectasis. Of the 53 cases only 5 progressed to pneumonitis or pleural effusion. The remainder were minor problems that promptly responded to therapy. While the frequency of diarrhea following vagotomy has been appreciable it was considered to be persistent or disabling in 5 patients. Wound infection after vagotomy and pyloroplasty was 5.7% when the late infections were included. Following gastric resection it was 8%. Among the 25 patients with infection the organism cultured was gram negative in 13 and gram positive in 12 patients. Persistent gastric atony occurred in 6 patients following vagotomy. Pyuria was reported in 7 patients postoperatively.

TABLE 6
GASTRODUODENAL SURGERY
Flagstaff Hospital 8-1-63 to 1-1-74
Postoperative Complications - 403 cases

	227 Vagotomy & drainage	57 Resection	108 Others	13 Deaths
Atelectasis-transient	37	5	4	
Pleural effusion	3	2		
Pneumonitis	3	2		
Pulmonary embolus	3 (2)		1	1
Septicemia	2	1	1	4
Fever-cause?	1	3		
Wound infection	7 (6)	4 (1)	4 (1)	
Peritonitis	2		1	
Pyuria	5		2	
Pharyngitis-acute	1			
Parotiditis	1			
Cardiac tamponade		1		1
Myocardial infarction	1			
Cardiac arrythmia	3			
Thrombophlebitis	1 (2)	1 (1)		
Hemorrhage	1 (1)		1	1
Anticoag. bleeding	3			
Anemia	1			
Cerebrovascular crisis	2			
Esophageal obstruction	1			
* Esophageal perforation	2			
Gastric atony	6			
Anastomosis obstruction	2			
Persistent ileus	4			
Colitis		1	1	1
Diarrhea-persistent (dumping)	4 (7)	2 (2)		
Nausea-persistent		1		
Singultus	1			
Bowel Obstruction	(3) (1)	1		
Jaundice	1			
Liver failure	1			1
Renal failure	3			3
* Splenic tear-splenectomy	5	1		
Chylothorax		1		1
Psychosis	1		1	
Pancreatitis	(1)	1		(1)
Incisional hernia	(7)			
Failure to gain weight	(4)		(2)	

(Late Follow up 241 Cases)

*OPERATIVE

TABLE 7
GASTRODUODENAL SURGERY
Flagstaff Hospital 8-1-63 to 1-1-74
Death Following Surgery

Diagnosis	Procedure	Cause of Death	Day Post. op.
1. Duodenal Ulcer c Massive bleeding	Vagotomy & Pyloroplasty & Suture	1. Pulm Embolus 2. Uremia 3. Uremia & CHF 4. Septicemia	11 9 3 2
Intractable	Vagotomy & Pyloroplasty & Suture (outlet obstr'n) 2. Gastrectomy Gastrectomy & Vagotomy	1. Pancreatitis 1. Pericardial tamponade	20 1
2. Gastritis c Cirrhosis c Massive bleeding	Vagotomy & Pyloroplasty	1. Liver failure	12
3. Gastric Ulcer c Massive bleeding Hypertension c renal artery stenosis	Vagotomy & Pyloroplasty & Suture 2. Renal endarterectomy	1. Uremia	24
Perf'n & Bleeding p Nephrectomy	Suture (-reperforation) 2. Resuture & Gastrost.	1. Gastropheural fistual etc.	11
4. Gastric Carcinoma Cardia	Gastrectomy (Ca in resection margin) 2. Esophagogastrectomy & jejunal loop	1. Jejunal loop ulcer massive bleeding	28
Inoperable	Gastrotomy & Biopsy	1. Retroperitoneal cellulitis & septicemia (gas)	2
Incurable	Gastrectomy	1. Septicemia	2
5. Pancreatic cyst & Bowel Obstruction	Cystogastrostomy	1. Septicemia	1

When the postoperative hospital stay was examined, those patients with complications following surgery did not remain in the hospital beyond ten days in 72% of instances. Following vagotomy and pyloroplasty 73% of the patients left the hospital in less than 11 days. Following a gastric resection 63.9% of the patients were discharged before the 11th day. Following other gastroduodenal procedures 50% of the patients left the hospital before the 11th day. Among the 10 patients who had more than one operative procedure performed during the same hospitalization 7 remained in the hospital over 21 days.

Postoperative complications leading to death are also included in Table 5. The tabulation of deaths (Table 7) shows the diagnosis at the time of surgery, the operative procedure performed, and the major cause of death. From

1-1-64 to 1-1-74 there were 9 postoperative deaths following 379 procedures. From 8-1-73 to 1-1-67 there were 140 patients operated upon with 7 postoperative deaths. From 1-1-67 to 1-1-74 there were 263 patients operated upon with 6 postoperative deaths. Using a comparable gross number of patients for two periods of time one notes a decline in the death rate from 5% to 2.2%. For the ten year period the overall mortality rate was 2.4%.

Four patients died after a second operative procedure was done to treat a complication of the initial surgery. The cause of death was related to the second surgical procedure in three of those patients.

DISCUSSION

Surgical problems of the stomach and duodenum are usually discussed together because

physiological mechanisms and diseases are shared or are closely interrelated. The most common disease of the gastroduodenal area is peptic ulcer. It is the most serious non malignant disease of that part of the gastrointestinal tract. It affects 10 million citizens with a high morbidity to society.⁴

Pathogenesis of peptic ulcer remains poorly understood in spite of much sophisticated investigation regarding vagus nerve function and biochemistry of gastrin.³ Duodenal ulcers are generally associated with excessive acid production in the stomach while gastric ulcers have relationships to mucosal abnormalities, gastric retention, back diffusion of hydrochloric acid, and periodic excesses of acid production.¹⁵

The treatment of peptic ulcer disease is successful without surgery in a high percentage of cases. When there is medical treatment failure, intractability, hemorrhage, obstruction, or perforation surgical treatment is often indicated. In contrast to cases of duodenal ulcer the cases of gastric ulcer that often require surgical treatment are those with intractability or recurrence following medical therapy. The fear of an overlooked gastric carcinoma in a gastric ulcer has not proven to be an adequate only reason for removal of most gastric ulcers.^{10, 14} The improved accuracy of radiological examinations and the more frequent use of fiberoptic gastroesophagoscopy have improved the selection of patients with gastric ulcers that need surgical treatment.

The surgical treatment of duodenal ulcer has produced lively discussions among surgeons for decades. During the past 30 years the value of vagotomy in addition to drainage or resection procedures used to treat duodenal ulcer has been proven.^{7, 9, 13} Accumulation of post vagotomy results have shown a significant incidence of incomplete vagotomy, persistent diarrhea, and gall stone formation.¹⁸ This has motivated surgeons to modify the location and extent of the vagotomy together with preservation of the pyloric sphincter. While the results appear encouraging to the author, it appears that more time and experience should lapse before the truncal vagotomy should be abandoned in favor of the selective type of vagotomy.^{1, 8}

When prevention of recurrent ulceration is the main goal of the surgical treatment of duodenal ulcer Posthelwait¹³ found the combination of vagotomy and gastric antrumectomy yielded the

lowest incidence of recurrent ulceration. Proponents of vagotomy and pyloroplasty have accepted a higher incidence of recurrent ulceration following surgery together with a lower morbidity and mortality in contrast to the resection procedure.^{7, 9} In recent years the morbidity and mortality rates following vagotomy and resection have more closely approached those following vagotomy and pyloroplasty.¹³ The operative complications have been noted to be 10% following resection as opposed to 6% following vagotomy and pyloroplasty.¹⁵ The philosophical question that remains to be answered is how many recurrent ulcers equal one postoperative death.

Gastric ulcer is as serious a problem as duodenal ulcer but with variations. One half of the deaths due to peptic ulcer disease occur among gastric ulcer patients. One fourth of all massive upper gastrointestinal bleeders are due to stress gastric ulcers. While the majority of gastric ulcers are treated by gastric resection there are cases of simple excision of the ulcer with vagotomy and pyloroplasty that have been reported with good results.¹⁴ In most cases the gastric resection that is done for gastric ulcer should include the pylorus, the antrum of the stomach, and the ulcer.⁵ When the ulcer is located just proximal to the pylorus a simple excision with pyloroplasty and vagotomy is adequate therapy. When the ulcer is located high on the lesser curvature of the stomach it may not be wise to attempt excision in all cases.

Following gastric resection for gastric ulcer the recurrence rate is very low. Anastomotic leakage is the most serious complication following surgery with a 10 to 15% mortality rate. Approximately 20% of patients have a "dumping syndrome" while only 5% actually seek help for their symptoms. Nutritional problems after resection have been found in 30 to 60% of patients. Calcium, Iron, and Vitamin B12 deficiencies are the most common problems. Diarrhea following resection or vagotomy has remained near 19% a year postoperatively.^{5, 15}

While the partisan advocates argue about the preferred operation for duodenal ulcer there is a general consensus concerning the definite indications for vagotomy. They are: 1. perforated duodenal ulcer, 2. acute bleeding duodenal ulcer, and 3. in bad risk or elderly patients with duodenal ulcers that require surgical treatment.^{7, 15}

Diaphragmatic hiatus hernia has become a problem of sufficient symptom production that surgeons have directed their thoughts to the indications for surgery; the type of surgical procedure recommended; and the results of the surgery.² Dissatisfaction with all three of those aspects of the problem has refocused attention on the physiology of the esophagogastric junction. Better evaluation of the patients has been stressed.² The proof of esophageal reflux with esophagitis must be obtained before surgical treatment can be considered. The use of the fiberoptic gastroesophagoscope has been very helpful in making a correct preoperative diagnosis.

The surgical treatment of hiatus hernia is directed to correction of the gastroesophageal reflux. The Hill posterior gastropexy combined with the Allison crural repair is one of the commonly used procedures. The Nissen fundoplication and the Belsey repair¹⁶ are used more often for recurrent hernias. The concomitant use of vagotomy and pyloroplasty is used when there is associated duodenal ulcer disease.² At times a gastrotomy is also required to suture mucosal tears seen in the Mallory Weiss syndrome.¹⁷

Halignancy of the stomach is seen with decreasing frequency in this country. Early diagnosis by using gastric cytology, diligent radiological examinations, and direct visualization with biopsy will offer a better chance to accomplish a curative surgical procedure. While cure is the aim of most surgical procedures it should not be sought with excessive morbidity and mortality postoperatively. Total gastrectomy and ultra radical resection procedures for gastric carcinoma have been done with decreasing frequency for that reason.¹¹

Most evidence has shown¹⁵ that a radical subtotal gastrectomy is as effective a curative procedure as total gastrectomy. When it is done with the intent to cure the 5 year survival rate is 25 to 30%. The overall outlook for gastric carcinoma patients remains poor since two thirds of the patients have findings at the time of diagnosis that eliminates them from curative surgical treatment. Other forms of treatment have been disappointing.¹²

SUMMARY

1. A ten and a half year experience with the surgical treatment of gastroduodenal disease in a small community hospital has been analyzed.

A total of 404 patients were treated. There were 13 early and late postoperative deaths. There has been a decline in the overall postoperative death rate to 2% during the past 6 years of this study.

2. In the group of 13 postoperative deaths there were 7 who had the presenting complaint of massive hemorrhage.

3. Complications following surgery were observed to not delay discharge from the hospital in 72% of cases. Secondary surgical procedures were required in 10 patients and in 3 of these a third procedure was required before the problem was resolved. Four of this group of ten patients died in the hospital.

4. This study has shown that the surgical treatment of gastroduodenal disease was done with acceptable results in a small hospital.

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PATHOGENIC AND THERAPEUTIC CONSIDERATIONS IN AN UNUSUAL CASE OF COCCIDIOIDOMYCOSIS

WALTER W. SITTLER, M.D., F.A.C.P.
GEORGE LASTNICK, M.D., F.A.C.P.

A case of cutaneous coccidioidomycosis, in a 78 year old caucasian male is presented. It is believed that this case presents features of primary cutaneous coccidioidomycosis and systemic coccidioidomycosis. The condition was treated with Amphoterycin B.I.V. The treatment used in this particular instance, complicated by poor renal function is discussed.

Coccidioidomycosis is endemic in Arizona and the following case report does not fulfill the criteria of either primary cutaneous coccidioidomycosis or systemic coccidioidomycosis with cutaneous manifestations.

Overhold and Hornick,¹ as well as other authors, feel that the most common skin manifestations in primary pulmonary coccidioidomycosis

From: The Departments of Internal Medicine (Dr. Sittler) and Medicine (Dr. Lastnick), Walter O. Boswell Memorial Hospital. Reprint requests to 13200 103rd Ave., Sun City, AZ 85351 (Dr. Sittler).

is the appearance of erythema nodosum, a manifestation of hypersensitivity occurring two to three weeks after the pulmonary infection.

Werner, Pappagianis, Heindl, and Mickel,² studying an epidemic of coccidioidomycosis among archeology students in Northern California, found out that more than half of twenty-one students who had the disease, confirmed by laboratory studies, presented cutaneous manifestation as generalized prurigo and maculopapular eruption, appearing in some cases similar to contact dermatitis.

Cutaneous coccidioidomycosis misdiagnosed as contact dermatitis is described by Werner³ in another paper.

Wilson, Smith and Plunkett⁴ in 1953 have established very strict criteria in differentiating the primary cutaneous coccidioidomycosis as compared with the skin manifestations following the systemic dissemination from an active pulmonary form.

In primary cutaneous coccidioidomycosis, the following criteria must be fulfilled.⁵

1. There should not be a history of significant pulmonary disease preceding the cutaneous lesion.

2. The history should be suggestive of inoculation through a break in the skin and by this token, farmers, agricultural workers, morticians, and laboratory workers would be the most exposed groups.

3. Short incubation, between one and three weeks, from the infection to the appearance of the lesion.

4. The primary lesion should resemble "the chancre" in primary syphilis or primary cutaneous tuberculosis, presenting as painless, indurated nodular plaque with central ulceration.

5. The precipitin reaction to coccidioidin should be positive at first, and then it should decline, while the complement fixation should be negative at first for several weeks, and then it should become positive in low titer, unless immunity fails to develop.

6. The skin test to coccidioidin should become positive and should increase in sensitivity unless immunity fails to develop.

7. Lymphangitis and lymphadenopathy in the region of the drainage, and possible subcutaneous nodules, should develop.

8. Spontaneous healing of the primary cutaneous lesion should occur within a few weeks, un-

less the patient is immunologically defective.

9. The incidence of this form is rare and the prognosis is excellent.

The cutaneous manifestations of the disseminated coccidioidomycosis has the following characteristics: its appearance can follow immediately the pulmonary form, or after a quiescent period of time. The lesions present as indurated subcutaneous nodules leading to abscesses or draining sinuses, or as verrucous plaques with irregular slowly extending borders. The lymphangitis and the lymphadenitis are absent. The skin test is negative or weakly positive, the precipitin antibodies are sometimes negative, while the complement fixation is positive with high titer, over 1:16.

In both forms, both sexes seem equally affected mainly between 25 to 55 years of age, with a higher incidence of the disease among blacks and Philipinos.

Other authors, accept this classification, and present cases with one or several deviations from this strict criteria.

Zeller⁶ describes a case with primary cutaneous coccidioidomycosis, but with high CF titer and with long evolution, cured by treatment with Amphotericin B.

Levan and Huntington Jr.⁸ feel that the primary cutaneous lesion could represent the dissemination from a pulmonary focus which has healed completely.

Winn⁷ feels that primary cutaneous inoculation in an uninfected person can result in prolonged illness and systemic dissemination.

Wilson⁴ accepts the fact that systemic spread may take place from a primary cutaneous lesion.

We believe that our case presentation illustrates Winn's and Wilson's points of view.

CASE REPORT

Mr. G. B., a 78 year old, white caucasian male, was examined by a physician in February, 1972, for an abscess located on the dorsal aspect of his right hand, over the fifth metacarpophalangeal projection. The patient could not describe the circumstances leading to the appearance of his lesion although he stated that he often scratched the skin of his hands while collecting rocks, which was his favorite hobby. The abscess was surgically opened, but subsequently failed

to heal, with continuous drainage from the surgical wound. In May, 1972, a culture taken from the fistula revealed the presence of *C. immitis*. Reconstructive surgery was performed, followed by local treatment with Amphotericin B cream. The wound seemed to heal at first, but later the drainage from the surgical wound increased and in September, 1972, other small abscesses appeared almost simultaneously on his right leg, the dorsum of his right foot, and over his left heel. The patient was hospitalized.

The examination of the skin revealed the following. He had a fistula located on the external and dorsal aspect of his right hand, on the fifth metacarpophalangeal projection which presented as a linear loss of tissue, about 1½ inches long with marginal inflammatory reaction and a continuous yellow discharge (Figure 1). The anterior aspect of the right leg, above the ankle (Figure 2), the dorsum of the right foot (Figure 3), and the left leg above the left heel (Figure 4) presented subcutaneous nodular formations from 1½ to 2½ inches in diameter, soft, non-tender, immobile, with a slight marginal inflammatory reaction and a yellow drainage from central openings. There was no evidence of lymphangitis or lymphadenopathy.

There was evidence of arteriosclerotic heart disease with cardiomegaly and atrial fibrillation. He presented an atrophic left testicle which had been injured in childhood and was very tender on palpation. He had diffuse osteoarthritic changes affecting his hands, feet and knees and mainly his left hip.

The culture from the lesions of the right foot, right leg and right hand revealed the presence of *C. immitis*. The left leg lesion culture was negative. The serology revealed CF for cocci positive in the titer of 1:64 while precipitins undiluted and in dilution of 1:10 were positive, but in dilution of 1:40 were negative which was highly suggestive of systemic disease. The skin test to coccidioidin in dilution 1:100 was negative reflecting a lack of immune response. The x-rays of the right foot, right ankle, right hand and left foot showed some soft tissue swelling but no evidence of osteomyelitis. The sedimentation rate was 44. The serum creatinine was 1.7 and the creatinine clearance test was 55 ml per minute. The chest x-ray showed no evidence of primary pulmonary disease. The other laboratory findings were within normal range.

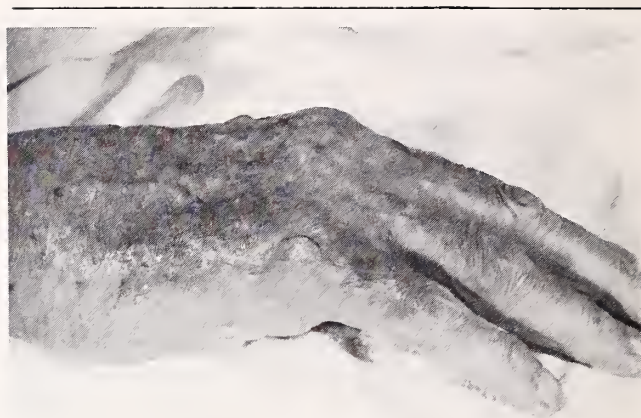


FIGURE 1

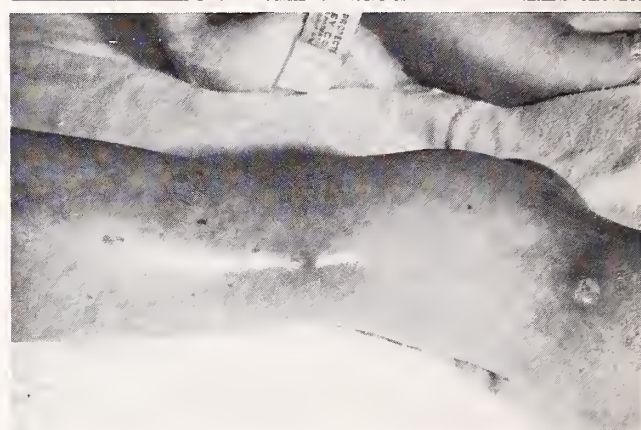


FIGURE 2



FIGURE 3

The positive culture from the abscesses and the positive serology confirmed the fact that we were dealing with multiple skin lesions of coccidioidomycosis, as well as with systemic coccidioidomycosis. Intravenous treatment with Amphotericin B was started. Because of his advanced age, his heart condition, his probably poor kidney function and a recent history of transitional cell carcinoma grade 2 of the bladder, a very cautious therapeutic approach was begun. The patient was started on 2 mg Ampho-



FIGURE 4

tericin B, I.V. in 300 cc 5% D/W with 1500 units of Heparin over 6 hours period, with a daily increase of 2 mg. A maximum dose of 40 mg daily was reached.

The treatment was monitored by checking his CBC, platelets count, BUN, creatinine, potassium and urinalysis four times a week, and towards the end of the hospitalization three times a week.

The Amphotericin B has a definite hypokalemic effect. Whenever the potassium serum reached a level close to 3.5 we had to interrupt the treatment, in order to avoid hypokalemia, especially dangerous for our patient, because of his heart condition. Potassium chloride solution 10%, one or two tablespoonfuls daily, added to his therapy maintained his potassium serum at a normal level.

The treatment with Amphotericin B has a temporary reversible adverse effect on the renal function. We interrupted the treatment when the BUN showed values of 45 and/or the creatinine presented values of 2.5. Two creatinine clearance tests, taken in October, 1972, and January, 1973, showed values of 41 ml per minute clearance.

The white count and platelets count remained stable but the hemoglobin dropped to 9 to 10 gm, and the PCV dropped to 30. The red cell indices indicated normocytic, normochromic anemia. For this type of anemia there is no need of interrupting the treatment, unless it reaches a very low critical point. The administration of iron or the use of transfusion is valueless.

Local treatment with Amphotericin B cream was also used.

The course in the hospital revealed no amelioration the first six weeks when he suddenly



FIGURE 5

developed a diffuse erythema on the right heel, over two inches diameter in size (Figure 5). Dermatological consultation confirmed another skin manifestation of the systemic coccidioidomycosis invasion. After three weeks this new lesion disappeared and the patient continued to show improvement of all the skin lesions which decreased in size and showed less inflammatory reaction. The lesions of the left heel and the right hand healed completely. At that time the patient had received about 1200 mg of Amphotericin B. In spite of his apparent good progress we were concerned mainly because of his apparent lack of immunologic response. The skin tests to coccidioidin in 1:100 or 1:10 dilution were consistently negative. We were considering using transfer factor in addition to the Amphotericin B, when on January, 1973, his serology showed that his CF titer had dropped to 1:32 and the precipitins had become negative. The culture from the lesions discharge showed no more evidence of fungi growth.

Treatment was continued in the hospital until January 27, 1973, when he was discharged to his home. At that time the lesions to the right leg had decreased to about $\frac{1}{8}$ inch diameter with little discharge and inflammatory reaction. The lesion of the dorsum of the right foot had decreased to about $\frac{1}{4}$ of an inch diameter with very little drainage and no inflammatory reaction. At the time of his discharge from the hospital the patient had received 3,581 mg Amphotericin B, I.V. He was instructed to continue the treatment as an out-patient in the Hospital Emergency Room, under the same strict laboratory and clinic follow up.

On April, 1973, the CF titer was normal with a value of 1:2. Treatment was discontinued. All

his lesions were healed, with the exception of the lesion of the dorsum of the right foot which was slightly inflamed with slight discharge. The patient continued the local treatment with Amphotericin B and at the beginning of May, 1973, this last lesion also healed. The patient had a total of 4,031 mg Amphotericin B, I.V. at the end of his treatment.

In May, 1973, the patient was seen in urologic consultation because of constant chronic discomfort in the left scrotal area, and a left orchiectomy was performed. The pathology report confirmed the diagnosis of an atrophic testicle with granulomatous epididymitis due to *C. immitis*. At that time his CF titer showed a value of 1:2.

On June 20, 1973, his complement fixation to cocci showed a sudden rise in titer of 1:32 with precipitins undiluted positive, 1:10 positive, and 1:40 negative.

The patient was readmitted on June 29, 1973, and Amphotericin B therapy resumed on the same schedule as during his first hospitalization. On July 18, 1973, his complement fixation titer had dropped to 1:16 and all the precipitins had become negative. At the same time his skin test to cocci was positive in dilution 1:10 while negative in dilution 1:100. During his last days of hospitalization the patient became very depressed and confused and was transferred to a psychiatric hospital where spinal fluid examination demonstrated complement fixation for cocci titer 1:2. Final follow up on August 20, 1973, revealed the complement fixation titer had dropped to 1:4, the precipitins were positive undiluted, and in dilution 1:10, and negative in dilution 1:40. The patient had received 500 mg Amphotericin B during his last hospitalization, a total of 4531 mg.

The patient failed to show any specific organ system target involvement with cocci, all the objective findings, including laboratory, x-rays, remained unchanged and the infection appeared arrested.

DISCUSSION

Our patient's disease did not fulfill all the criteria of either primary cutaneous coccidioidomycosis, or disseminated coccidioidomycosis with cutaneous manifestations. The past history as well as his chest x-rays seemed to rule out any primary pulmonary involvement. He was a rock collector and often bruised and scratched his hands. Winn⁹ presents three cases of cutaneous

coccidioidomycosis in children who contacted the disease in endemic areas in California, after accidental lacerations of the skin which served as portal of entry for the *C. immitis*. Winn⁹ also presents another case of coccidioidomycosis, a man who lived in California in an endemic area for a few months and who developed an abscess with cocci seven years later.

We presume that his first abscess represented either a very late manifestation of a primary infection, or a primary lesion secondary to an abrasion which the patient suffered while working with his rocks.

Our patient presented some features suggestive of systemic coccidioidomycosis with cutaneous manifestations, such as typical abscesses, the usual pattern of his serology and skin tests, the organ (testicle) involvement, his favorable clinical evolution after the administration of Amphotericin B. The onset of the disease and the lack of apparent initial pulmonary pathology fit the criteria of primary cutaneous coccidioidomycosis.

Amphotericin B, I.V. is the only drug which can challenge successfully the disease. J. P. Utz¹⁰ tries to build up slowly and to give the drug I.V., one mg per kilogram, per day. The treatment is done daily or every second day. The Amphotericin B is given in 500 cc to 1000 cc 5% dextrose in water over 2 to 6 hour periods as long as the patient does not show any intolerance to the drug.

Because of the age of the patient, the renal involvement and his multiple concurrent condition we elected to give him only a maximum daily dose of 40 mg Amphotericin B or less than .5 mg per kilogram per day. Authors differ in the average total dose per treatment. Some give 2 grams but there are instances when up to 7 grams total dose was needed for a total permanent cure.¹¹ There are no definite criteria for discontinuing therapy. We discontinued the initial treatment with Amphotericin B when the CF titer returned to normal. At that time we considered that we had obtained a biological cure.

The most significant danger of the Amphotericin B is the renal toxicity. The drug seems to affect the glomeruli and the tubules as well.¹² After giving the patient 3,581 mg of Amphotericin B, the BUN was 24 and the creatinine in serum was 1.1, better than at the time of his admission. It was of interest that patient's kidney function was not worsened by Amphotericin B.

Our patient developed as do 75% of the patients treated with Amphotericin B a normocytic, normochromic anemia, due probably to red cell production inhibition by the drug.¹⁰ This anemia doesn't require and doesn't respond to any type of treatment and usually disappears after the interruption of the Amphotericin B. One month after the interruption of the treatment with Amphotericin B I.V. his hemoglobin and hematocrit returned to normal values. The WBC and the platelets count at no time gave evidence of bone marrow depression.

Hypokalemia can be a major side effect and seems to be the result of the action of Amphotericin B on the red cells with depletion of the intracellular potassium and increased potassium excretion.¹⁰

At the beginning of his I.V. treatment with Amphotericin B the patient presented general toxic side effects, manifested as fever, chills, general malaise, which were controlled rapidly with steroids, I.V. This general toxic phenomena probably represents side effects to the Amphotericin B although some authors believe that they could reflect the coccidioidin toxicity.¹³ Giving the patient, one hour before the treatment, Hydrocortisone 35 mg I.M. and aspirin 10 grains p.o., administering the Amphotericin B I.V. slowly over six hours, we were able to avoid these general side effects.

At the onset of the treatment the patient presented on a couple of occasions superficial thrombophlebitis at the site of the veins used for the I.V. treatment. By adding 1500 units heparin to the bottle with the I.V. solution, this side effect was also eliminated.

We contemplated the excision of the abscesses with pre and post operative protection with Amphotericin B, and finally we decided against this course, in spite of the fact that most of the authors favor this management. We could not be certain that the dissemination of the disease was not due at least partially, to the two previous surgical interventions. We believe that his left orchiectomy performed when the patient seemed completely cured from the clinical and serologic point of view, played at least a partial role in the serologic reactivation of his disease.

In conclusion we believe that this case of coccidioidomycosis with cutaneous manifestations presented some unusual features because of

1. Evidence of traits of both primary cutaneous coccidioidomycosis and cutaneous manifestations of the systemic coccidioidomycosis.

2. Clinical and biological cure by using small daily doses of Amphotericin B I.V., much below the standard recommended doses.

3. The renal function was not impaired further by treatment with Amphotericin B.

ACKNOWLEDGMENTS

1. We wish to express our thanks to Dr. N. Kuivinen, Dr. L. Taylor, Dr. S. Banks, Dr. A. Palmer, the nursing staff, the staff of the Laboratory at Walter O. Boswell Memorial Hospital in Sun City, Arizona, for their contribution in the management of this case.

2. We wish to express our appreciation to Dr. Anthony Catanzaro at the University of California, San Diego for telephone consultations.

3. We also wish to express our thanks to the Medical Library of the Maricopa County Medical Society and the Women's Auxiliary at Boswell Memorial Hospital.

4. The pictures were executed by the courtesy of the Public Relations Department at Walter O. Boswell Hospital, Sun City, Arizona.

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TSUTSUGAMUSHI FEVER IN ARIZONA

RAYMOND C. POGGE, M.D.

With jet-age travel shrinking our globe, diseases which we were once taught were exotic and rare are no longer unusual. The following case report of Tsutsugamushi Fever (Japanese scrub typhus) illustrates this point very well. A careful travel history should be taken in patients presenting with unusual or uncommon manifestations in infectious illness.

We are now living in the age of the international Jet Set. Our modern transportation system can take us to almost any portion of the world. In some of these places we can even get a martini that is almost as good as the one we would have mixed at home.

Unfortunately, people are not the only passengers. Pathogenic organisms are beginning to have a field day; they can even invade Arizona.

Our patient was a man from Texas who was returning from California. He had a high fever and a red throat. Since he was from out of town, we put him in our small community hospital and gave him the usual antibiotics. Shortly thereafter he developed a pronounced skin rash. Having been so brain-washed by the Food and Drug Administration which has taught us that the principal effect of any medication is a side reaction, we discontinued the antibiotics. Much to the potential chagrin of the F.D.A. the rash got worse. At this point we realized that we were not dealing with the ordinary "Strept throat."

HOSPITAL CASE HISTORY

Mr. B. L. P.

Chief Complaint: Sore throat and high fever, failing to respond to antibiotic therapy started at Casa Grande Clinic.

Present Illness: About two weeks prior to the onset of symptoms, this man was bitten by an unidentified insect. The scar remains on the right leg just below the popliteal fossa. June 9, 1973 he began having high fever and complained of sore throat. He was seen in the Casa Grande Clinic on June 11 and was given an injection of Terramycin with Vibromycin started by mouth. The fever and sore throat continued, and he was admitted to the hospital on June 12. Shortly thereafter a spotted rash occurred on the extremities and later on the trunk. This was originally attributed to erythromycin which was given to him. Accordingly he was switched to Loridine and the fever came down but the rash continued

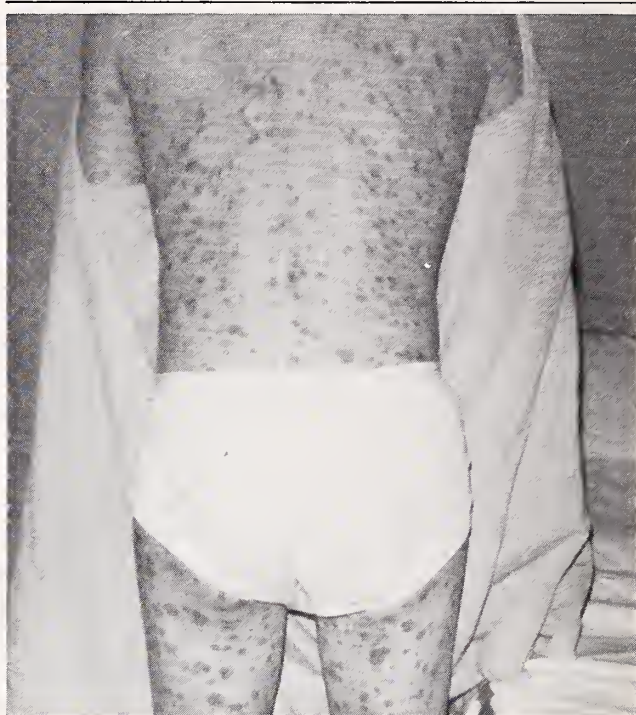


FIGURE 1

after which the medication was stopped.

Past and Family History: Were not contributory.

PERTINENT PHYSICAL FINDINGS

This man was acutely ill and weak, lying in bed and complaining of a fever and sore throat. Pulse was 90 and regular, respiration 12. BP 115/80. The jaw opened with some difficulty. The throat was diffusely (or generally) red. There was some tenderness at the base of the skull posteriorly. There was some cervical lymphadenopathy. Rales were heard diffusely especially over the right side of the chest. Liver or spleen could not be palpated. A wide spread macular rash appeared the day after admission. This became worse in spite of attempts to treat it with steroids and adrenalin.

Laboratory: A diagnosis of Tsutsugamushi fever or scrub typhus was made by positive agglutination tests (vida infra). Specifically, our patient was found positive to OXK strain but negative to OX19 and OX2.

From: The Casa Grande Clinic, Casa Grande, AZ 85222 (Dr. Pogge).



FIGURE 2



FIGURE 3

R.O.S.: Negative except for sore throat, some cough and subsequent appearance of some stiffness of the neck and stiffness of the joints.

COMMENT

The differential diagnosis of Rickettsial disease is confirmed by the laboratory studies.¹ Specifically, the Weil-Felix reaction is negative in Brill's disease, Rickettsial pox., Q fever, and trench fever. The positive reactions are as follows:

Tsutsugamushi disease (scrub typhus)

OXK strain

Typhus

OX19 strain

Rocky Mountain Fever

OX19 strain and OX2 strain.

The rash of Tsutsugamushi disease is illustrated in Figures One to Three taken of Mr. B. L. P. during the time of hospitalization.

There are many causes of a skin rash other than dermatitis medicamentosa. A very high index of suspicion is justified when the skin lesions fail to clear upon withdrawal of all medication, especially antibiotics. Tsutsugamushi disease is an example of an exceedingly rare cause of such a condition. However rare the disease, it can be a very real problem to the patient who suffers from it.

The effective drugs in the treatment of Tsutsugamushi disease are the tetracyclines and chloramphenicol. The patient's family preferred to have the treatment administered in one of the large metropolitan hospitals. Accordingly, he was transferred to another institution where the diagnosis was reconfirmed. The patient responded rapidly to appropriate antibiotic therapy.

"Foreign" diseases can occur in the United States and probably will with increasing incidence as foreign travel increases. The diagnosis of Tsutsugamushi disease (scrub typhus) was made in Arizona in a man who apparently contracted it in California and was in route to his home in Texas. The effective antibiotics in the treatment of Tsutsugamushi disease are tetracyclines and chloramphenicol.

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CLINICAL NOTES ON DETECTION OF HIDDEN GONORRHEA IN OFFICE PRACTICE—1974

DENNIS R. SEMKIN, M.D.

This study was done in a Clinic group of three doctors. The reason this study was undertaken was because of the deluge of material noted in medical periodical articles that indicated gonorrhea was quite common in the female patient and was missed commonly on diagnosis because of lack of detecting this by culture. It also was noted that there were a number of nonsymptomatic patients who were carriers of gonorrhea, but could be diagnosed probably by culture for this organism. I decided to set this study up for 100 female patients, taken in order as they came into the Clinic under normal general practice conditions. These patients were separated in regard to whether they were symptomatic or nonsymptomatic.

The procedure used in doing this study consisted of 100 female patients ranging in age from 18 years up to 60 years with the majority of the patients being between 18-45 years of age. There were 17 patients who were older than 45 years of age. If the female patient came in for a routine breast and pelvic examination for Pap smear or was symptomatic in regard to pelvic symptoms, they were recorded in the study as such. A symptomatic patient consisted of someone who had leukorrhea, pelvic pain, vaginal discharge, or some symptom that the patient herself was aware of and complained of. Patients who showed evidence of leukorrhea or some cervical irritation on routine examination was not considered to be symptomatic.

The laboratory studies done on these patients consisted of a gram stain at the time this was done with a sterile cotton swab, one being used for the endocervical canal and one being used in the anal canal as sites for culturing. Each swab was used. A Thayer-Martin culture plate was used to grow these specimens.

Findings in this study of the 100 female patients showed 33 of these to be symptomatic on a subjective basis out of the 100. The remainder of the female patients who are included in this study came in for routine breast and pelvic examinations and Pap smears of the cervix.

In the study, there were 7 gram stains that showed evidence of gonorrhea, the 7 in this group were all from the symptomatic patients. Five of these showed positive gram stains, and two were possible positive gram stains. On the gram stains that were positive, two appeared to be positive on Thayer-Martin, and three of those were negative for growth on Thayer-Martin. Of the two slides that were possibly positive, one was positive on Thayer-Martin, and one was negative on Thayer-Martin for growth.

These patients were all treated with recommended therapy for gonorrhea, and were followed. Five of the seven returned for followup examinations and they were negative on gram stain and followup culture on Thayer-Martin. Two of these did not followup in regard to treatment.

SUMMARY

It would appear, from this few number of cases in our practice, that the patients who were symptomatic were the ones who had gonorrhea. Other patients who were symptomatic the gram stains were as reliable as the Thayer-Martin culture that was done. No patients who were nonsymptomatic (there were 67 patients) showed any evidence of gonorrhea. It is also of note that in our practice there are two colleges located in this city and a number of the patients who were seen, especially those symptomatic, were promiscuous in regard to sexual activity, and admitted this freely on questioning.

From: 1065 Ruth Street, Prescott, AZ 86301 (Dr. Semkin).

DOES MARIJUANA DAMAGE THE BRAIN?

In the debate on the question of whether or not marijuana is hazardous to health a dispassionate observer must be forced to conclude that there is probably little or no hazard associated with the use of a single joint — or even a few joints — but there is enough evidence suggesting potential dangers from long-term, heavy use of marijuana that concern and caution are mandatory.

Tetrahydrocannabinol, the principal psychoactive constituent of cannabis, has a very high affinity for brain and other lipophilic tissues. With repeated administration there is a gradual buildup of the drug and its metabolites in the brain, according to Julius Axelrod of the National Institute of Mental Health, Bethesda, Maryland. Many scientists believe that the continued presence of tetrahydrocannabinol in the brain induces a set of mental characteristics termed the "amotivational syndrome." This syndrome is familiar to most clinicians who have treated cannabis users, and has best been described by psychiatrists Kolansky and Moore of

the University of Pennsylvania and Hardin James of the University of California, Berkeley. This syndrome was observed with the smoking of cannabis three to ten times a week for sixteen months. Mendelson and Meyer of Harvard's Alcohol and Drug Abuse Research Center observed that certain individuals show a marked dose-related decrease in motivation and performance on testing. This phenomena was especially apparent among the light and moderate cannabis users who quickly began to smoke very heavily and was also reported by Reese Jones of the Langley-Porter Neuropsychiatric Institute in San Francisco, Sidney Cohen of the UCLA Medical Center, and Leo Hollister of the UA Research Hospital in Palo Alto, California.

As controversial as the evidence regarding the linkage of cannabis and brain damage may be, there seems to be enough evidence suggesting the possibility that marijuana damages the brain that discretion would require avoiding the risk. (*Science*, 23 August, 1974, p. 683 and 30 August, 1974, p. 777-779).

John R. Green, M.D.



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Dean's Page

CLINICALLY RELEVANT RESEARCH IN THE DEPARTMENT OF BIOCHEMISTRY



NEAL A. VANSELOW, M.D.

A wide variety of basic biochemical research is carried out in the Department of Biochemistry. This research contributes to our understanding of biological processes, but some is more immediately relevant to clinical problems. It vividly illustrates how basic scientists in a college of medicine can use their expertise to develop new information which may ultimately prove useful in patient care.

Dr. William Grimes is studying the biochemistry of complex polysaccharides of eukaryotic cells, in various normal and transformed cells. Some of the transformed lines cause regressive tumors; others, tumors whose progressive growth ultimately kills an immunocompetent host. Dr. Grimes hopes to be able to use the immune system of tumor bearing animals to characterize complex polysaccharides which function in tumor progression and regression.

Dr. Donald Hanahan is studying the properties of the erythrocyte, particularly the manner in which certain processes of the cell vary with age. He has shown that older cells contain a higher proportion of sodium than younger cells. This change may reflect alterations in the properties of the cell membrane and provide a key to understanding aging of the cell. Dr. Hanahan is also studying the mechanism of blood coagulation. A detailed understanding of this important process is probably important as part of the study of cardiovascular disease.

Dr. Mark Haussler's research concerns the relationship of vitamin D to metabolic bone diseases and other dysfunctions of mineral metabolism. Vitamin D was previously thought to act analogously to other classic vitamins. However,

recent research shows that it must be converted in the kidney to a new sterol hormone, which carries out the functions heretofore ascribed to the vitamin. Because many bone diseases characterized by demineralization could result from defective production of this new hormone, Dr. Grimes devised a radioreceptor-competitive, protein-binding assay that can measure the blood level of the hormone in humans. Patients with renal osteodystrophy, hypoparathyroidism, and several idiopathic conditions exhibit subnormal circulating concentrations of the hormone. Two hypoparathyroid cases were successfully treated with the hormone, biosynthetically generated in his laboratory, and further therapeutic trials are planned. This diagnostic test may shed light on the etiology of previously unexplained calcium and bone disorders. Coupled with hormone treatment in appropriate cases, this research could lead to the alleviation of serious bone diseases in children and adults.

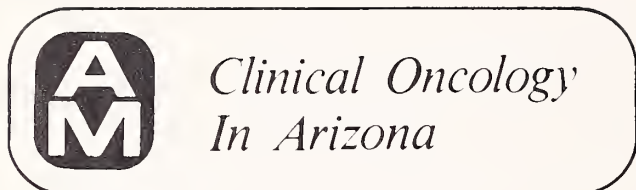
Dr. Christopher Mathews' laboratory is interested in the biosynthesis of DNA and its precursors. Disease frequently occurs as the result of rapid growth of an organism at the expense of surrounding tissue of its host organism. Because sustained rapid growth requires vigorous DNA synthesis for duplication of the genetic material, this is a suitable area of metabolism in which to seek biochemical targets for controlling the proliferation of such pathogens. Two projects are under way: (1) studies with purified enzymes of DNA precursor synthesis known to be the target sites for action of antineoplastic agents; (2) investigations of mutant strains of bacterial viruses which cannot replicate their

DNA. If we can learn why a particular mutant is unable to synthesize DNA, we should discover a hitherto unidentified step in DNA replication, and hence identify a possible new target for eventual therapeutic control.

In collaboration with Dr. R. Neal Pickard of the Department of Microbiology, Dr. Merle Olson is pursuing a problem regarding the diagnosis and characterization of myocardial infarction in experimental animals and in patients. These studies encompass: a) the temporal development and auto-antigenic specificities of anti-heart auto-antibodies associated with several myocardial diseases; b) documentation of the development of cell-mediated autoimmunity to heart sub-cellular membranes following myocardial cell necrosis; and c) elucidation of the mechanism of antibody-independent activation of the early classical complement components of membranous cellular constituents from heart tissue. The ultimate objective is to determine whether factors initiating acute and chronic myocardial inflammation affect and/or predict the early and late clinical course of patients with myocardial infarction.

Dr. Michael Wells has collaborated with researchers at the University of Washington in studying essential fatty acid metabolism. These studies concern defining the need for fatty acid supplementation for patients on long term parenteral feeding regimens. They have established criteria for evaluating the nutritional state of these patients.

Neal A. Vanselow



*Clinical Oncology
In Arizona*

CONTROVERSIES IN CANCER

This new section in *Arizona Medicine* is specifically targeted to the subject of cancer care in the state of Arizona. Recognition of the importance of cancer management has been underscored by the establishment of the conquest of cancer as a national goal. In this column, current concepts in cancer management and recent advances in cancer research that are relevant to Arizona, will be discussed each month. Cancer therapy is currently changing at an extraordinarily rapid rate, and the views expressed on this page should not be considered as static recommendations. The editors of this column will select key topics and invite interested physicians and allied health professionals from Arizona to write components related to areas of their expertise in cancer.

Editors: Paul H. Duffey, M.D., F.A.C.P., Hematology-Oncology, The Tucson Clinic, Tucson, Arizona 85716; Sydney E. Salmon, M.D. Professor and Head, Section of Hematology and Oncology, University of Arizona College of Medicine, Tucson, Arizona 85724; Robert H. Thoeny, M.D., Dir., Radiation Oncology, Good Samaritan Hospital, Phoenix, Arizona 85006.

The editors of this page realize full well that there is no single, standard method for treating an individual patient with a particular type and extent of cancer.

The controversy over the surgical procedure of choice for breast cancer has been brought forcefully to the attention of the public by the recent operations on Mrs. Gerald Ford and Mrs. Nelson Rockefeller. To irradiate preoperatively, postoperatively, or not at all is still an unsettled question. Whether or not adjuvant therapy with drugs postop will improve survival statistics is currently being tested. If so, which drug or combination of drugs given by what dosage schedule will be most effective? Will the increase in survival be worth the cost of the side effects sustained?

We recognize that research leaders in these fields as well as practitioners caring for patients in their home town will not always agree on the best approach for a given cancer patient. We have invited researchers and practitioners to contribute to this page their best thoughts on current treatment of given cancers. We have instructed them to be brief and to the point for the average case, realizing they cannot cover all the special situations that could be encountered. In some instances the editors have disagreed somewhat with the authors and have made minor alterations to make the article more balanced.

All of us human beings, authors, editors, researchers, and practitioners are fallible. Therefore the editors of this page invite submission of brief discussions (not more than 150 words with no more than 2 references) of any point already published on this page for which a physician feels a better or at least major alternative was not adequately covered.

These will be published as a group periodically as we receive them. This opportunity is not intended for nit-picking or professional character assaulting but rather for education of physicians in Arizona to the best available methods of cancer treatment for their patients.



Obstetrics and Gynecology

IDENTIFICATION OF THE HIGH-RISK PREGNANCY

HARLAN R. GILES, M.D.

Over the past decade, the increasing availability of modern obstetrical and neonatal facilities and techniques has brought about a marked reduction in perinatal mortality. Neonatal intensive care systems have similarly exerted a profound impact on infant survival. Today infants thrive at gestational ages and birth weights that were considered inconsistent with extrauterine life only several years ago. Yet, encouraging as all this may seem, the fact remains that one baby is lost for every 69 live births in the United States today. Although this certainly represents an improvement when contrasted with statistics from 10 years ago, there has been little change in overall perinatal mortality over the past several years. In fact, this has lead some observers to conclude that we have achieved the maximum perinatal salvage — that a further reduction in perinatal loss cannot be expected, much less actually attained.

How can we improve perinatal statistics? Analysis of perinatal morbidity and mortality data informs us that the majority of poor pregnancy outcomes can be traced to a minority of patients with certain medical, social and psychological complications. Such patients are classified as high-risk. The sub-specialty of perinatal medicine is founded on the concept that such patients can be readily identified using present-

day clinical and laboratory facilities. Moreover, the majority of such high-risk patients are detectable by means of a simple screening questionnaire. Some representative high-risk categories are described below:

AGE

Pregnant teenagers require special attention. Not only do they have a high incidence of toxemia, premature delivery, and desultory labor, their unique social circumstances often result in detrimental psychological sequelae.

Elderly gravidas have similar difficulties as far as the labor process is concerned, and the incidence of mongol births rises dramatically after age 35.

PARITY

Grandmultiparas have a higher incidence of uterine atony or rupture resulting in hemorrhage. This risk is particularly elevated when labor must be induced.

SOCIAL SETTING

Patients who are poor, uneducated, or living in overcrowded conditions have a decreased chance for infant survival. The New York City study showed this to be related to poor prenatal care, as evidenced by the almost complete reversal of the data when high-risk care was instituted in the ghettos.

MEDICAL CONDITIONS

Patients with diabetes, hypertension, or cardiac disease have a four to five fold increase in perinatal mortality. Certain conditions such as pulmonary hypertension or lupus erythematosus carry a real threat of maternal mortality as well.

PREGNANCY COMPLICATIONS

Problems arising during a pregnancy such as premature labor, third trimester bleeding, toxemia, or Rh sensitization should shift the patient to an intensive obstetrical setting.

OBSTETRICAL HISTORY

Patients who have previously experienced pregnancy losses, whether early or late, are far more likely to have difficulty with the present gestation. Such a history should also suggest the possibility of maternal diabetes.

DRUG ABUSE

Patients who are addicted to narcotic drugs present a complex medical and social problem for the perinatologist. Intrauterine growth retardation and premature labor and delivery are the rule rather than exception. Moreover, infants of addicted mothers may exhibit severe withdrawal syndromes requiring protracted hospitalization.

There is little benefit to be derived from recognition of the high-risk gravida if she does not receive graded high-risk care from an appropriate secondary or tertiary facility. Over the past two years, a pilot program at the University of Arizona has shown that transportation of the high-risk mother offers distinct advantages over

transport of the newborn infant. This is especially true in the case of premature labor. Age for age, diagnosis for diagnosis, the newborn has a greater chance for survival and a shorter mean hospital stay when he is born in the center next to intensive nursery facilities. The cost-effectiveness of maternal transport can also be easily demonstrated.

It is reasonable to conclude that the highest standard of medical, social, and psychological care afforded the high-risk gravida must exert a salutary effect upon fetal outcome. It is only through an intensive and collaborative effort between primary, secondary, and tertiary centers that we can expect to reduce the loss of babies and mothers in the process of childbirth.



Editorial

TIME



WILLIAM B. McGRATH, M.D.

In this, the November of my life, my heart is coughing. And on the surface of my brain are forming the blisters of regret. Earlier this morning when I selected the turkey for Thanksgiving dinner I felt a twinge of guilt: it occurred to me that I was committing a fowl.

No; be charitable to psychiatrists. As Milton concluded the sonnet on his blindness: "They also serve who only stand and wait." Psychiatrists are like the biblical "lillies of the field, who toil not, neither do they spin." We should be cultivated but not fertilized . . . Back to work.

One of the first lessons one learns in any profession is that you can hardly afford to be friendly. Familiarity breeds (sic) and hospitality leads downward to basements in which inevitably you will have to be rude. You just cannot

pause or be interrupted to visit with someone who appears without an appointment. There is no such mirage as a time when a telephone call might be convenient.

A professional man can care about and really love a lot of people. But he cannot stand still long enough to be beloved in return. We disappoint and defeat many persons who would like to repay us with friendship and not just in coin. This is the saddest price we pay.

Secondly, the professional man can never even come close to satisfying the demands of his own practice. He can never afford the steady attention and study which every case deserves. This is why our most common and constant state of mind is a mixture of hurry and apprehension. We are more nervous than anyone can tell. We live in lonely trepidation.

There is at least one compensation for seniority and long service. One feels fairly certain that he will not be overtaken by surprise. The tadpole intern fears that he will either perform creditably in a given emergency or he will fail catastrophically and be eaten alive. The older bullfrog croaks the assurance that nothing astonishingly new or different is likely to confront him.

A disadvantage of being older is that we live in the past. For example, when one is young and vigorous he enjoys horseback riding or hunting or, say, going down the river on a raft. When you are spent, such activities are wearisome at the time and pleasant only to remember. If you will excuse the archaic term and promise to think beyond taking offense at the metaphor: life is a turd!

The limits of time are really tragic. Time is the visible spectrum. In it we view only our own artifacts and our precious little conceits of causation. We have only inchoate, foetal notions of what is going on in the infra red and ultra violet realms of existence and in the human mind. We are like an oriental, carving one with-

in the other those intricate ivory spheres.

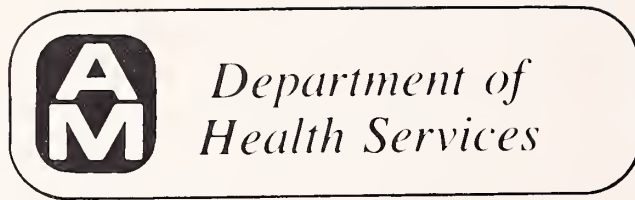
Our next case may involve some psychosomatic distress or alcoholism or other evidence of maladjustment or demoralization. From repeated and disheartening experiences the patient is convinced that he will not have time to listen to him and come to know him and understand his unique predicament. If we have been helpful to a troubled individual, once in a while, it is because somehow we have reassured him that he will not be judged on the basis of the shards of information which he can submit. Our further duty, of course, is to get him to quit judging himself on incomplete and insufficient grounds.

A rowdy woman shot and killed an insulting stranger in a bar. Mechanisms of condensation and displacement could be discerned in her motivation. On more than a dozen occasions she had gone to the police to complain of brutal abuse by her common-law husband. Instead of offering a constructive solution, or at least protection, they had laughed at her. It was an ugly affair.

When she finally took the witness stand, the court permitted her to unfold chronologically each of the important chapters of her life. Her faltering account of herself was neither hurried nor interrupted. All of us observed what appeared to be a miracle. It was as if a rheostat had gradually changed the lighting until that slut became a sorrowful human being.

Second only to the wish for innocence, and related to it, is the wish for a hearing; i.e., the universal but hopeless wish for an opportunity to present one's case.

Earlier we wrote that the parent creates the child and the child creates the parent. So God creates us and we create God. Mindful of the narrow margins of human comprehension, we assume that God sees the whole timeless pageant. He may find us guilty or innocent or both or neither, but at least and at last He will give us a hearing.



ARIZONA PIONEERS' HOME

Old age hath yet his honor and his toil.
Death closes all; but something ere the end,
Some work of noble note, may yet be done,
Not unbecoming men that strove with Gods . . .
Tho' much is taken, much abides; and tho'
We are not now that strength which in old days
Moved earth and heaven, that which we are, we are —
One equal temper of heroic hearts,
Made weak by time and fate, but strong in will
To strive, to seek, to find, and not to yield.

JAMES L. SCHAMADAN, M.D.

Ulysses

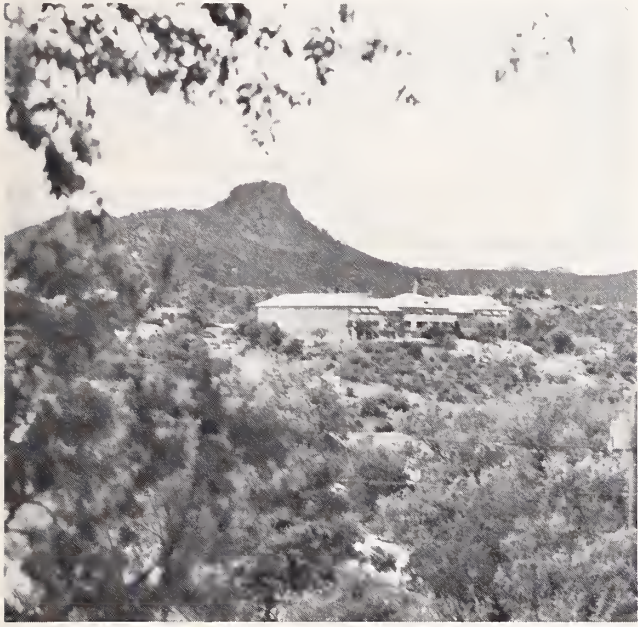
Like Tennyson's Ulysses, the Arizona pioneers are a troupe of "gray spirits yearning in desire." It was not too long ago that Arizona was the last wild frontier under territorial law, with a harsh landscape vexed by an unwelcoming climate. About 140 of the citizens who still remember those days reside at the Pioneers' Home, nestled on a hill overlooking Prescott. The home recently became a part of the Department of Health Services.

The Pioneers' Home is licensed as both a nursing home and a personal care home. It came into existence in 1910 by an act of the Territorial Legislature. Its purpose was to provide a home for destitute miners and pioneers. The first wing was built on land donated by Frank M. Murphy — 4½ acres of hillside in Prescott.

To enter the Pioneers' Home, a person must be 70 years of age and have lived in Arizona for 35 years. He or she must be able to walk unaided and do his own personal care. Most importantly the guests do not turn over their property to the State; they are charged according to their ability to pay. The charge is never more than the actual cost which is currently around \$500 per month. To apply for admission to the

Arizona Pioneers' Home, an applicant must request application forms from the Clerk of the Court in the county in which he resides or from the Department of Health Services, Bureau of Nursing Services. After completing an admission form, a financial statement, friend's certificate and physician's certificate must be completed. The forms are submitted to the Judge of the Superior Court in the county in which the individual resides. The Judge completes the final section of the application and forwards it to the Department of Health Services where it is recorded, reviewed and acted upon. Each applicant receives a personal interview by the Superintendent of the Home before a decision is made.

Once admitted, a guest may spend the remaining years of his or her life in the secure surroundings of the Pioneers' Home. As a resident ages and becomes less self-sufficient, facilities are available for additional care as needed. Dr. Ernest Born has recently retired after being the house doctor for many years. His services were paid by the State. If a resident wishes, he may have his own physician but must pay directly for those services. The Home operates its own pharmacy, and nursing carts make the rounds to dispense prescribed medicine.



The Pioneers' Home is nestled on a hill overlooking Prescott, Arizona.



Jesus Ortega, guest, relaxes in the main lounge.



Al Nelson cuts gems in his room at the Pioneers' Home.



Bill Powell, guest, stands in front of the Arizona Pioneers' Home.

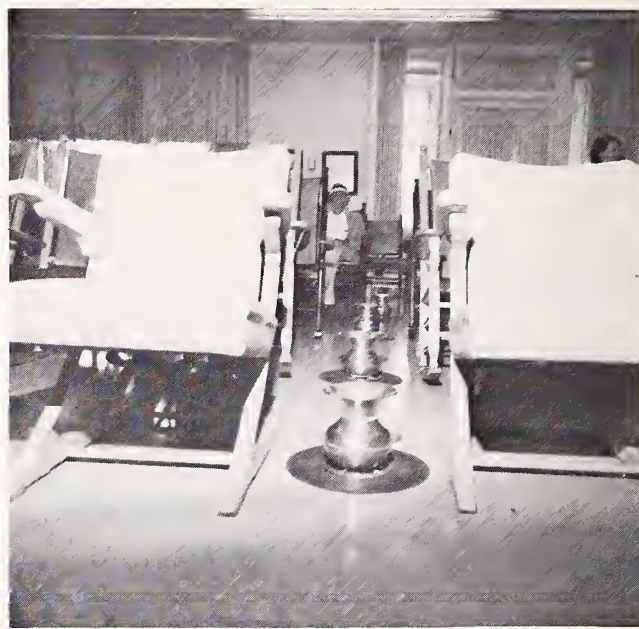
Today, the mansion on the hill is administered by Pearl Carroll who has worked very hard to provide a home-like atmosphere for her guests. Meals at the Home are served family style with six guests to a table complete with a centerpiece. In addition, activities are tailored to personal interests with the help of Barbara Nagel, the activities specialist. One guest has a garden, one operates the library, another paints and still another teaches gem cutting to fellow guests. Of course, there are always stories about the old

days circulating the atmosphere. One guest still harbors a bullet in the leg, shot from the gun of Pancho Villa. Another guest remembers the day she was left in camp to wash clothes, cook a rabbit stew, deliver her own child and shoot two renegade Indians before her husband returned to camp to complain the rabbit stew was tough.

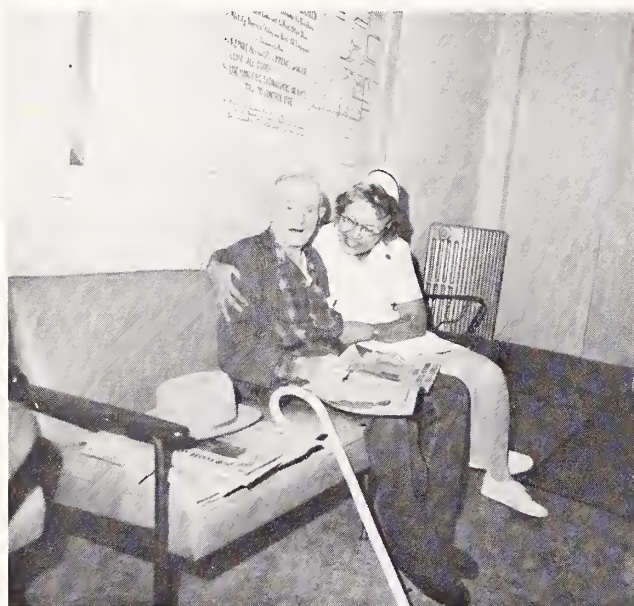
To operate the Home smoothly and to maintain the dignity of the guests, the rules and regulations are kept to a minimum. Barbers and beauticians frequent the Home, and residents



Marion Parker Fall enjoys painting in her room.



Daniel Purtyman relaxes in the main lounge where brass cuspidors are not just for decoration but are frequently used.



Louise Mowinski, R.N., comforts guest Henry Haught near the nurses station.



Pearl Carroll, superintendent, chats with Edna Wells on the front porch of the Pioneers' Home. Edna retired from school teaching after 38 years.

are allowed to choose their own dress and are encouraged to stay well groomed. Entertainment provided the guests ranges from fashion shows to concerts and dancing. In addition, the outside community is encouraged to participate in the activities of the Home.

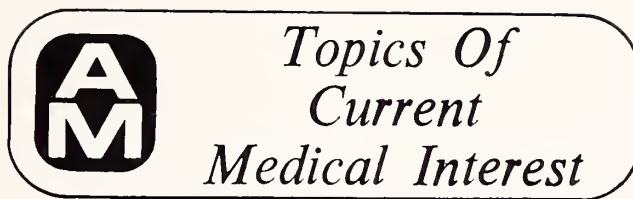
As part of the Department of Health Services, many additional services are now available to the Pioneers' Home. Pearl Carroll is assisted with administrative, fiscal, legal and construction expertise, as well as consultation and

staff training in nursing, dental, nutrition, laboratory and speech and hearing therapy.

The guests at the Home frequently remark that the place is "just like home." That's probably because at the Pioneers' Home, compassion is the most important virtue.

If you or any of your patients would like to learn more about the Arizona Pioneers' Home, please call the Department's Bureau of Nursing Services at 271-5256.

Photos by: Don Hutchinson



IN DEFENSE OF DOCTORS

ROBERT A. FISCHL, M.D.

DANBURY, CONN.

Who has become the most important person in the practice of medicine aside from the doctor and his patient? Not the patient's relatives, not the nurse, not the technician. It's the lawyer. The inescapable fact is that the legal profession has encroached into the practice of medicine. Now let us examine whether the interposition of lawyers in the practice of medicine has made the care of patients better or worse. The other day I saw a patient in the office who had a mole that she wished to have removed. I listened to her, examined her, wrote down all the pertinent details on at least two sheets of paper, made a drawing of the mole and took some photographs. After that, I explained to her the alternatives of electrodesiccation and surgical excision, what I thought the diagnosis was and the likelihood that it was benign. Then I explained to her the possibility of its being malignant was small but that it existed, and that removal of the mole, would not, in all likelihood, incite malignant changes and then explained to her about the procedure of removing the mole; how she

would be placed on the operating table, given a local anesthetic, have the lesion excised without pain (other than that from the local anesthetic) and have it sutured and how the lesion would be sent for pathological examination. After that I described how long it would take for the sutures to be removed and how soon the site would "heal." She wanted to know whether there would be a scar, and I had to tell her honestly that there would probably be a small scar. How big would the scar be? Approximately so long. "Whoo," she said "Why so big?" Then I went into an explanation of why the removal of a circular lesion by an elliptical excision produced a scar approximately $2\frac{1}{2}$ to three times as long as the lesion itself. I also explained that the scar would be red at first and would later fade, but that I could not guarantee that it would not become hypertrophic. At this she was rather shocked, and I tried to calm her fears saying that most scars became pale and thin and relatively inconsequential. After this, and some further conversation, I filled in a small slip on which the operation was described for the bene-

fit of my secretary, who would schedule it. Would you all agree that this was pretty well routine procedure, and that you might do the same thing? The next day the patient's husband called me and said, "Cancel the whole thing. I don't want my wife having a scar which is going to be bigger than what she has now."

I won't go into the details of how I discussed with the husband (and how long it took me) what kind of a scar it would be and then again explained that one could give them no guarantees. In fact, I had to make a mountain out of a mole. Now, who among you has not had a similar experience?

When I worked in England a patient came to the doctor and said, "I have this mole here. Would you advise removing it?" The doctor would say, "yes," or "no," and make a note on the patient's chart such as "mole of forehead. Excise." He might even add "probably benign." The patient had sufficient trust in the doctor not to ask, "How big will the scar be?" but if she did, he would probably say, "Don't worry about it; after a few months you will hardly notice it."

Now what's wrong? Is it better to have a half-hour discussion with a patient and give her an abridged course in plastic surgery (without the board examination) or to ask for the patient's confidence and treat her with the assumption of such confidence.

We have been led to believe that all these things are essential — the warnings to the patient, the paper work, the photographs, the diagrams, the consent forms in duplicate, the written history and physical examination and the documentation of what was discussed with the patient and the warnings given to her. Is this really a part of medicine, or is it the practice of law? We choose to call it the practice of defensive medicine, but in all honesty, it has nothing to do with treating patients. All this rigmarole is done — and you and I know it — to protect us in case of a lawsuit. We are told that our

medical record has become a legal document. So we keep it like one. More and more we use the circumlocutions of lawyers and fill out charts with words that will protect us in case of that much feared suit.

Unfortunately, rather than examine what has brought us to this impasse, we are busy devising new protection mechanisms. All these add complications and paper work, unnecessary medical investigations, the wasteful letting of blood and the uneconomic use of Roentgen rays, each of which may bring their complications. That is to say nothing of the time and energy wasted and the nights of worry, not only about the patient's health but about the aggressiveness or veracity of the lawyer who lurks behind every patient.

Most of our patients are decent people who come with a problem, ask for advice, request treatment and get it. They are grateful and go away praising us. That is what we are used to. However, among every busload of patients there is one or two who come to challenge, to query, to compare doctors, to check up on another doctor, or even to threaten.

Why has this happened? Not because patients have changed. It is because the malpractice suit has become a public spectacle, because the legal profession has made capital out of it, and because "every man has the right to sue his doctor" — but first you have to find something to sue him for.

The prophets of our profession are advocating greater and greater safeguards, including tighter consent forms, more copious records, longer discussions with patients, the avoidance of drawings or diagrams that might show the patient what one plans to do, the avoidance of forecasting favorable results, not showing photographs of previous successes, guarded optimism, guarded discussions with patients and even making tape recordings of these conversations. What have we come to in the practice of medicine? How far have we come from treatment of the patient for a specific condition by the best available

means? We are now practicing the same verbal convolutions as the lawyers, and we are being encouraged to follow the same evasive tactics.

Look at your hospital chart: 20 sheets of paper for one day of hospitalization with six or seven places where you must sign or you are held "delinquent." Who designed those things? Doctors, hospital administrators, lawyers? Why are they so voluminous? Is it because of medical necessity, or is it in anticipation of having to defend a medical decision, or, heaven forbid, a complication? Who writes in these charts? Well, mostly the doctor of course, because if anyone else writes something that might be a mistake, guess who's liable?

We must get these lawyers off our backs. Get them to take care of their own crisis, the crisis in their profession, the crisis in the law courts, the crisis of crime, which hasn't been dealt with, the crisis of politics in the federal government, at the local level or wherever you look. The only health-care crisis is one of paper work. If we had to do less writing and could take care of more patients, you would need half as many doctors. If fewer doctors were employed defending malpractice suits, if fewer unnecessary but "defensive" investigations were done, there would be less need for medical manpower. If fewer doctors spent their time sitting on those committees and checking up on other doctors, you would find that the medical needs of the community were easily met.

Why should the patient have to worry about the complications of an operation, when his doctors already worry about them and take every precaution to avoid them? Yes we should give patients an honest and accurate appraisal of what to expect, but not frighten them with unnecessary warnings of rare and dire complications that hardly ever happen. And, if those complications do occur, we should treat them sensibly and sanely without having to run for legal protection and without having to worry about

a malpractice suit every time the door opens. I would agree with the premise of "a chicken in every pot" and "a car in every garage," but not with the entitlement to a malpractice suit in every closet. The doctors and the medical profession should have the inalienable right to practice without fear. We are even now being enjoined by lawyers and politicians not to practice "defensive medicine." This, too, may soon be a cause for suit.

We must have some defense of doctors against the inroads of lawyers and politicians.

They see that in the practice of medicine there is still hope that patients respect the practitioner and that there is a certain measure of success in medical and surgical treatment. That's more than can be said for the successes at any level of government. In a recent poll of popular opinion, doctors were rated number one on a scale that measured the respect of their fellow citizens. Lawyers along with politicians, who are often lawyers were at the bottom of the heap. So it is an easy step from this concept to the announced desire to get all of medicine under a political roof — i.e., a nationalized health service. You can just hear them: "Here is a good thing; let's get on to it; let's make it ours."

Don't let us hang around and wait to see how they will ruin it. What has the law ever done for medicine except add complexities and convolutions undreamed of by Hippocrates or indeed anyone who followed him? Now they are trying to annex it.

A nationalized health service in one form or another seems inevitable. But when it comes, we must see that doctors, not lawyers and politicians, set the tone for it. In the meantime, we should sound a call for the socialization of the legal profession. If nothing else, recent events have shown that lawyers are incapable of policing, regulating and reviewing their own professional activity, and of providing to the populace the services and protection of the law.

ONE PHYSICIANS RESPONSE TO THE DEMANDS OF PROFESSIONAL LIABILITY

There's a new wrinkle in patient health education, called "contractual medicine," that represents one physician's response to the pressures of professional liability.

In Minneapolis, Minn., Donnell D. Etzwiler, M.D., has entered into written contracts with his 70 diabetic patients to spell out what is expected of them. A major factor in his action, Dr. Etzwiler said, is recent laws requiring documentation of informed consent that "come very near to legislating patient education."

"The written contract formalizes the concept that patients share in the responsibility for their own health," Dr. Etzwiler said. "Consumer participation can be effective only if patients are properly prepared to assume these responsibilities and are accepted as members of the health care team.

"I developed these contracts to give my patients a clearer definition of what is expected of them. When you write it out, it means more. It's a motivational thing, like signing your driver's license."

Although Dr. Etzwiler works specifically with diabetics, he said the same principles apply to other chronic health problems.

"For decades the nation's number one problem was acute infectious disease. A patient with scarlet fever or whooping cough had virtually no role in his care. But the leading causes of disability and death today are chronic conditions — heart and respiratory diseases, diabetes, cancer, obesity, and alcoholism, for which effective control is impossible without the active cooperation of an informed patient."

"The patient may only see his doctor a couple of times a year. On a day-to-day basis, these patients are providing their own health care. It's up to the patient."

"For example, the heart patient could sign a contract pledging to follow exercise and diet instructions. The contract could provide an in-

Reprinted with permission from American Medical News, October 14, 1974.

centive for anyone to cut excess calories or give up cigarettes. Anything that requires a large degree of patient participation.

"While such a contract is not legally binding, a doctor could reach a point where he would tell a consistently uncooperative patient that, as a physician, he could no longer be responsible for that person's health."

It is in that implied threat, Dr. Etzwiler said, which the contract's potency lies.

Another major area where the contract approach may be beneficial is in convincing patients to take prescribed drugs.

At the Minnesota College of Pharmacy, an experiment found that the percentage of patients who take drugs as prescribed is quite low.

A week after their discharge from the Minneapolis Veterans Administration Hospital, 30 patients who had been given a variety of prescriptions for various physical conditions were interviewed.

By checking the patients' prescription bottles and talking to them, it was found that only four of the 30 had taken all their medication. If these patients had followed their prescriptions, they would have taken 1,060 doses. However, 234 had been skipped.

"Also," as Dr. Hugh F. Kabat of the U. of Minnesota noted, "an estimated 22 million Americans have high blood pressure, and although it has no specific symptoms, it's a major killer. But, many people shun their prescribed drugs because they don't feel bad. The contract approach could help explain to people the need to follow their prescriptions and motivate them to do so."

Dr. Etzwiler began his program after running a six-month experiment involving 100 diabetics, ranging from 9-24 years of age.

"I wanted to see if a contract would encourage patients to make regular urine tests, which can spot excess sugar in the body. The idea was to

spot the danger signs in time so that the patient's insulin-injection schedule could be adjusted before complications arose.

"I had 50 of the diabetics sign statements saying 'I will test three to four times a day and send the results to Dr. Etzwiler.' The other 50 agreed to do the same thing, only verbally."

The results were conclusive. Some 62% of the contract patients lived up to their commitment, while only 20% of the patients who had made verbal agreements kept them.

"From that experiment," he said, "we decided to implement the contract idea, and it has been quite successful."

Interviewed at a summer camp of young diabetics where he was presiding as resident physician, Dr. Etzwiler, whose specialty is pediatrics, explained that the contract idea lay not so much in his own initiative as it did in the evolving nature of the health care system itself.

"Traditionally, the only responsibility the health care system placed upon the consumer was to pay bills. However, that is changing.

"With more legal pressure being placed upon the physician to be exact in his work, it's only natural that the physician will begin to expect more of his patient. The laws that are being promulgated these days are virtually forcing the physician to bring the patient into the health care team.

"For example, laws that require documentation of informed consent force a physician to do more than merely inform his patient. It's very near to legislating patient education."

However, Dr. Etzwiler cautioned, teaching a patient does not always insure that he will become any more aware. "Non-cooperation is always a factor," he said.

"I guess you could say that the closest thing to forcing a patient to cooperate is to have them sign a contract," he noted. "And although it's not legally binding, for many people the psychology of it is enough."

CHANGES IN PHYSICIANS' FEES SINCE THE INCEPTION OF THE ECONOMIC STABILIZATION PROGRAM —AN OVERVIEW

The expected period of adjustment at the end of a long period of stringent, selective controls on physicians and institutional providers accounts for recent price increases in the health care sector.

A better perspective of relative price increases within the health care sector as opposed to other parts of the economy can be gained by examining increases within the relevant sectors since the beginning of controls. Such figures are presented in Table 1, which shows the percentage changes for selected items of the CPI from the beginning of controls up to the latest month for which data are available.

Table 1 shows that during the period August, 1971 through July, 1974:

- a. physicians' fees have increased only 16.1 percent;
- b. prices in the health sector increased 16.5 percent;
- c. "all services" category increased 17.8 percent;
- d. "all items" component increased 21.4 percent; and
- e. legal fees increased 32.8 percent.

PHYSICIAN FEE INCREASES SINCE 1960

The pattern of physicians' fee increases during the 1960's and 1970's are traced in Table 2. The table shows changes in the Consumer Price Index (CPI) as a whole and in selected components including physicians' fees:

- From 1960 to 1965, physicians' fees rose at an annual rate of 2.8.
- This rate of increase, while higher than "All Items" and "All Services" components, was less than the rate of increase for hospital daily service charges.
- In the years following Medicare (1966-1970) physicians' fees and hospital daily service charges rose rapidly and at a greater rate than the index as a whole.
- Beginning in 1971 (inception of the ESP) and continuing through 1973 the CPI increased at a greater rate than physicians' fees.

Prepared by the Center for Health Services Research and Development, American Medical Association, Chicago, August 29, 1974.

TABLE 1

PERCENT CHANGES IN SELECTED ITEMS OF THE CONSUMER PRICE INDEX
FOR SELECTED MONTHLY INTERVALS FROM AUGUST, 1971 THROUGH JULY, 1974

	ALL ITEMS	ALL SERVICES	MEDICAL CARE	HOSPITAL SEMI-PRIVATE ROOM CHARGES	PHYSICIANS' FEES	LEGAL FEES
Aug. 71 - Dec. 71	0.7	1.1	0.0	1.2	0.7	5.6
Aug. 71 - Mar. 72	1.4	2.0	1.0	3.8	1.3	6.0
Aug. 71 - June 72	2.2	2.9	1.8	4.8	2.0	12.5
Aug. 71 - Sept 72	3.2	3.6	2.4	5.9	2.4	12.3
Aug. 71 - Dec 72	4.1	4.7	3.3	6.3	3.2	14.3
Aug. 71 - Mar. 73	6.2	5.6	4.4	8.6	4.2	17.4
Aug. 71 - June 73	8.3	6.8	5.4	9.4	5.2	19.1
Aug. 71 - Sept 73	10.3	8.7	6.4	10.7	6.4	23.0
Aug. 71 - Dec. 73	13.3	11.2	8.7	12.4	7.3	26.2
Aug. 71 - Mar. 74	17.1	13.6	11.4	15.4	10.5	29.0
Aug. 71 - June 74	20.4	16.6	14.9	19.7	14.6	31.1
Aug. 71 - July 74	21.4	17.8	16.5	22.2	16.1	32.8

Source: Consumer Price Index (Bulletin) for Data Months Dec. 1971; March, June, Sept., Dec. 1972; March, June, Sept., Dec. 1973; Mar. June 1974. Oral Communication, Bureau of Labor Statistics, Washington, D.C., August 21, 1974 for July, 1974.

Prepared by the Center for Health Services Research and Development, American Medical Association, Chicago, August 21, 1974.

TABLE 2

ANNUAL PERCENT CHANGES FOR SELECTED CPI COMPONENTS (1960-1973)¹

CPI COMPONENT	AVERAGE ANNUAL PERCENTAGE CHANGE 1960-1965	1966	1967	1968	1969	1970	1971	1972	1973	SEVEN MONTHS OF 1974
ALL ITEMS	1.3*	3.3	3.1	4.7	6.1	5.5	3.4	3.4	8.8	7.1
ALL SERVICES	2.0*	4.9	3.9	6.1	7.4	8.2	4.1	3.6	6.2	6.0
MEDICAL CARE	2.5*	6.6*	6.4*	6.2*	6.0	7.4	4.8	3.3	5.2	7.1
PHYSICIAN FEES	2.8*	7.8*	6.1*	5.8*	7.3	8.1	5.2	2.4	4.0	8.2
HOSPITAL DAILY SERVICE CHARGE	6.4*	16.6*	15.4*	13.3*	12.0	12.5	8.9	N.A.	4.3	7.2
DENTIST FEES	2.4*	4.6*	5.1*	5.1*	7.5	5.8	6.4	2.8	3.7	6.3
PRESCRIPTION DRUGS	-.8*	.2*	-.2*	.4*	1.7	1.7	-1.5	-1.2	.2	2.0
LEGAL SERVICE	N.A.	N.A.	N.A.	N.A.	10.7	10.6	8.7	8.2	10.4	5.3

¹

Percentages shown are measured from December to December except for 1974 which is December to July. Unless otherwise indicated, these data are taken from the December CPI publication, Tables 1 and 8, for each year shown. July 1974 figures were obtained from the Bureau of Labor Statistics, Washington office.

*

Source: Research and Statistics Note, Nov. 2., 1971, March 23, 1971, U.S. Department of HEW, Social Security Administration, Office of Research and Statistics, page 3 and Table 3.

TABLE 3
PERCENTAGE CHANGES IN SELECTED CPI COMPONENTS (1974)

	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY
ALL ITEMS	.9	1.3	1.1	.6	1.1	1.0	.8
ALL SERVICES	.7	.7	.8	.6	1.0	1.0	1.1
FOOD	1.6	2.5	.6	-.3	.7	.4	.1
MEDICAL CARE	.6	.8	1.0	.6	1.1	1.5	1.3
Physician Fees	.4	.9	1.7	.6	1.3	1.8	1.3
Dental Care	1.2	.3	.6	1.0	.6	1.3	1.2
Hosp. Serv. Charges	.6	1.0	.7	.4	1.8	1.4	1.5
Semi-Priv. Room	1.1	1.0	.6	.3	1.3	2.0	2.1
Operating Room	.3	2.2	.7	.9	.4	2.4	1.3
Presc. Drugs	.4	.2	.2	.1	-	.4	.7
LEGAL SERVICES	-.3	.2	2.3	.2	.2	1.2	1.3

Source: Consumer Price Index (Bulletin) for all Data Months except last which was oral communication from Bureau of Labor Statistics, Washington, D.C.

Prepared by the Center for Health Services Research and Development, American Medical Association, Chicago August 21, 1974

TABLE 4
ANNUAL RATE OF CHANGE OF THE CONSUMER PRICE INDEX AND THE MEDICAL CARE COMPONENTS DURING PHASE I, II, III AND IV AND THE POST CONTROL PERIOD

ITEMS OF CPI	ANNUAL RATE OF CHANGE					POST CONTROLS APRIL-JULY 1974
	PHASE I	PHASE II	PHASE III	PHASE IV		
	AUG-NOV 1971	NOV 1971- JAN 1973	JAN-JUNE 1973	JUNE 1973-a JAN 1974	JAN-APRIL-a 1974	
ALL ITEMS	1.6	3.6	9.1	9.6	13.0	12.6
ALL SERVICES	3.2	3.6	4.3	8.5	8.7	13.0
MEDICAL CARE	-.8 ^b	3.4	3.8	6.6	10.0	17.0
HOSPITAL SERVICE CHARGES ^c	N.A.	3.6	4.0	4.9	9.1	17.9
SEMI-PRIVATE ROOM	2.8	5.4	5.2	6.7	7.8	23.9
OPERATING ROOM CHARGES	6.1	7.8	7.8	5.2	16.1	17.9
PHYSICIANS' FEES	2.4	2.4	4.1	4.1	13.4	18.8

a - During the first part of Phase IV (June-Jan) the medical sector was under Phase III regulations. During the second part (Jan-April) the medical sector was under Phase IV regulations.

b - The decreases are due to the annual adjustment of the medical care index for the price of health insurance which is not shown as a component of the index but is a factor used in calculating the monthly index.

c - January 1972 = 100. Phase II annualized rate of change based on percentage change since January 1972 rather than November 1971.

Source: Consumer Price Index (Bulletin) for all months except July which was oral communication from Bureau of Labor Statistics, Washington, D.C., August 21, 1974.

PHYSICIANS' FEE INCREASES SINCE THE START OF THE ECONOMIC STABILIZATION PROGRAM

The Economic Stabilization Program (ESP) began in August, 1971, and lasted through April, 1974. The medical care sector achieved a remarkable level of compliance. Both physicians' fees and hospital semi-private room charges showed a significant decline from their former rates of increase. During each of Phases II, III, and IV, physicians' fees and hospital service charges increased at annualized rates which were less than the rate of increase for the "All Items" component of the CPI. This trend reversed during the first seven months of 1974 as health services were decontrolled — entering a stage which was reached by other sectors of the economy as many as 10 months earlier.

Fee Increases for Each Phase of ESP and the Post Control Period

- *Phase I* — During Phase I, physicians' fees and hospital semi-private room charges, along with prices and fees in most other segments of the economy, showed a decline from their former rates of increase.
- *Phase II* — Under Phase II, physicians held fees to an annualized increase of 2.4 percent, compared with 3.6 percent for "All Items." Not only did this performance meet the 2.5 percent goal that was set by the Economic Stabilization Program, but *it was also less than one-third the corresponding rate of increase for 1969 and 1970.* Hospital charges, while increasing at a greater rate than physicians' fees, increased only 5.0 percent during 1972 in contrast to 9.2 percent during 1971 and 14.0 percent during 1970.
- *Phase III* — The medical care sector operated under Phase III regulations for all of 1973, while the rest of the economy was placed under Phase IV regulations in July of 1973.

In 1973 the "All Items" component of the CPI increased at more than double the rate for physicians' fee increases. The percentage change in hospital semi-private room charges was also below the percentage change for the "All Items" component.

- *Phase IV* — The medical care sector was under Phase IV controls from January through April of 1974. During this period, physicians' fees and hospital semi-private room service charges increased at annualized rates that were less than that for the "All Items" component of the CPI. Physicians' fees increased at an annualized rate of 13.4 percent and hospital semi-private room charges increased at an annualized rate of 7.8 percent, while the "All Items" component of the CPI increased at an annualized rate of 13.0 percent.
- *Post Control Phase* — On May 1, 1974, physicians' fees and hospital rates were decontrolled for the first time since August, 1971. Economists and Cost of Living Council staff had anticipated a certain adjustment period for prices in the health sector.
 - a. Physicians who experienced substantial increases in operating costs during the last three years were unable to "pass-through" these costs in the form of increased fees under the ESP.
 - b. With the termination of controls, medical practices came under increased pressures from their employees (nurses, lab technicians, etc.) for substantive salary adjustments.
 - c. Physicians in recently formed practices were unable to increase their fees in line with increases in their experience, ability, as well as added operating expenses.

Accordingly, during May, June and July, 1974, physicians' fees have increased 4.4 percent, and hospital daily service charges rose 4.2 percent, while the "All Items" component rose 3.0 percent.

PHYSICIAN'S ASSISTANTS ORGANIZE

The formal organizational meeting of the registered physician's assistants of Arizona was held on October 5, in San Manuel. The P.A., a relatively new concept among allied health care professionals, was authorized by the state legislature in 1972. Since then, both the Medical and Osteopathic Boards of Examiners have been testing and certifying Physician's Assistants,

The duties of a physician's assistant vary according to the practice and function of his sponsoring physician. The P.A.'s, one to a doctor, are qualified by general education, medical training, both academic and practical, and experience as well as personal character. Their purpose is to relieve their sponsoring physician of many duties which normally require him but do not demand his degree of expertise and training. They are frequently termed "physician extenders." Of the assistants presently working in our state some have graduated from the recognized schools, some have been R.N.'s, some had advanced military training and some were trained over a long period of time by their sponsoring physician.

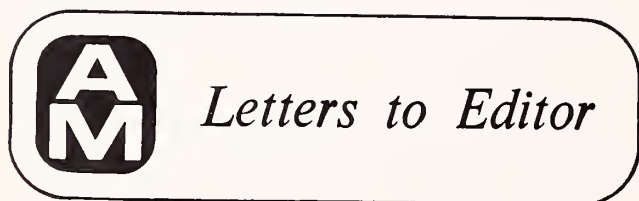
The new group chose Arizona State Association of Physician's Assistants for their formal name. The elected officers are: Bruce Alter from Benson, president, Buddy Woolbright, San Manuel, vice-president, Lynn Gilbert, Tucson, secretary and Thomas Griffith of Mesa, treasurer.



Newly chosen officers and committee members of the recently formed Arizona State Association of Physician's Assistants are: left to right, seated: Lynn Gilbert, Pat Spangler, Marcy Cookman; left to right, standing: Thomas Griffith, Jerry Gruber, Bruce Alter, Tony Kwan and Buddy Woolbright.

Others attending the initial meeting and chosen to the Committee for Continuing Education include Pat Spangler and Marcy Cookman of Phoenix, Tony Kwan, Scottsdale and Jerry Gruber of Chandler.

It was decided that this organization should have physician sponsor-advisors, since each assistant requires a sponsor to be legally recognized in the state. A tentative number of two doctors from each of the Arizona boards was designated at this time. The M.D.'s nominated were T. J. Hicks of San Manuel and John McGregor of Tucson. Dr. John White of Mesa was chosen from the Osteopathic side with one post left unfilled until further discussion.



John R. Green, M.D., Editor
Arizona Medicine
Dear John:

Re: Cultural Values and Productivity. As usual — another interesting bit of writing. Keep up the good work — I look forward to seeing your name in the index.

Fraternally,
Frank J. Honsik, M.D.

John R. Green, M.D.,
Editor-in-Chief
Arizona Medicine
My dear Doctor Green:

In the September issue of Arizona Medicine, your editorial was very excellent. May I commend you highly on the same. It is very comprehensive and marvelous in every respect.

We have two sons who are M.D.'s, one an ophthalmologist in Colorado and James P. Rigg, Jr., M.D. is with the FAA in Palmdale, California. I am sending the latter this editorial, and I know that he will enjoy it greatly as have I — most commendable.

Very appreciatively yours,
James P. Rigg, Sr., M.D.



AUDREY DAVIS STEVENS
1911-1974

Daughter of a physician, the wife of a physician — Audrey loved the aura of medicine.

Audrey had style without ostentatiousness, ability flavored with humility, and withal a great empathy for people.

Besides her historical contributions to this Journal, she authored "American Pioneers in Abdominal Surgery," a standard in its field. She was an avid searcher for material on western Americana medicine.

Audrey traveled and did "on the spot" research for this medical history writing, and along the way collected some unique antique medical and surgical instruments.

She bore her terminal illness with such equanimity that few of us guessed it was mortal.

Like Aurora of Mythology, Audrey "May now be sitting in a chariot and opening with her fingers the gates of the east at sunrise, pouring dew on the earth, and making flowers grow." All the while gathering some newly found pearls of medicine's past.

Hail and farewell.

John W. Kennedy, M.D.



In Memoriam

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ArMA
Medical History

THE SUMMERHAYES TREK — ONE HUNDRED YEARS LATER

DRY GULCH JAKE

Martha Summerhayes with her Army husband Lt. Jack Summerhayes left San Francisco by ocean steamer about 15 July 1874 bound for the Arizona Territory.

A hundred years later the Council on Abandoned Military Posts, led by their national commander Barrister Robert Yount of Scottsdale, and Dr. Clarence Yount, Jr. of Prescott as surgeon, chief scout, and woodcutter, about 25 trekkers took up Martha's trail at Fort Yuma and through the ensuing week walked and rode and sweated over much of the same trail reaching Fort Apache a week later.

Other Army wives and laundresses, soldier's wives, made this journey before and many were to follow their soldier husbands into Arizona Territory through the sixties, seventies and eighties. But none left such a poignant account of their journeys as did Martha, "Vanished Arizona, Recollections of my Army Life" first published in 1908. It has since undergone six re-printings and is a classic description of Army life in those early days in the Territory.*

The first limited edition of one thousand copies was quickly exhausted, Martha set about editing a second edition which was published in 1911. Within two months of its publication her husband John died and two months later Martha's life closed and both are now serenely settled in the Arlington National Cemetery.

W. T. Jackson, in an introduction to the 1962 edition, points out the unique factors in Martha's account. "Few pioneer women recorded their stories and observations for posterity. Those, like



Martha Summeyhayes, who did so, wrote for the enjoyment and edification of relatives and friends rather than for the historian or the general public. "Vanished Arizona" is exceptional because its author was a woman, an Army wife, and a sensitive, acute observer blessed with literary talent."

The 8th Infantry had been ordered to Arizona

Territory. The Summeyhayes left San Francisco mid August 1874 and after seven days aboard the steamer Newburn, they had rounded Cape St. Lucas, touched at Mazatalan with thirteen more days in the searing heat to the mouth of the Colorado. Here the wind and seas were so disturbing that it was seven more days before they could transfer to the river steamer Gila, a Colorado sternwheeler and finally after twenty-six days out of San Francisco they were to arrive at Fort Yuma.

The quarters where she spent two days in comparative comfort, are still in use, the remnants of Fort Yuma on the west bank of the Colorado at Yuma is one of the few structures still in existence, one hundred years later, that were visited by Martha in her Arizona Days.

Fourteen more days of river heat, and remember this is the last of July, first of August, and as she described it "more heat and worse food" brought them past Ehrenberg to Fort Mohave. As they passed Ehrenberg she thought this was "a most wretched place" little did she dream that in less than a year later she and her husband would be back to this station on assignment. It was to break her health and after about a year at this dismal place she was forced to go back east to regain her health.

But now back to Fort Mohave, it was established in April 1859 as Camp Colorado and in the same month the name changed to Fort Mohave. During the Civil War, when Federal troops were recalled for duty back east, it was manned by California Volunteers.

Nothing remains now of the original buildings, and the site is now desolate of all buildings, they were demolished for salvage in 1934. All that remains is the imagination which you bring with you, some slabs of cement, former building sites and scattered rusty nails. The fort itself was closed in 1890 and afterwards the Bureau of Indian Affairs established a school for Indian children which was closed in 1934. You can gaze across the river at the sloping hills on the California side. This was the termination of the Mohave Trail over which rolled hundreds of tons of Army supplies from San Pedro, California, supplying the troops in Arizona Territory. Fort Mohave was then an important supply post. The Colorado River steamboats were to be busy for about ten years, they faded and in the meantime were superceded by the Mohave Trail from California and then later by railroads.



Guard House — Fort Whipple, Az., Circa 1970. Now a Canteen of the Veterans Administration Facility, One of two original buildings which remain. (Courtesy Margaret Hall Museum, Prescott).

On the 8th of September they had reached Camp Mohave, eleven days from Fort Yuma and two days later were to begin the hazardous overland trip to Fort Apache. Martha described it this way. "At last the command moved out. It was to me a novel site. The wagons and schooners were drawn by teams of six heavy mules, while a team of six lighter mules was put to each ambulance and carriage. The main body of troops marched in advance, then came the ambulances, followed by baggage wagons and a small rear guard. When the troops were halted, once an hour for rest, the officers, who marched with the soldiers, would come to the ambulances and chat a while, until the bugle call for 'Assembly' sounded, then they would join their commands again and then would fall in and the call 'Forward' was sounded and the small sized Army train moved on."

The days march from then on was gauged by overnight camps where water could be found. These campsites are still discernible, nothing remains in way of a permanent structure, sometimes a rock wall or a rock foundation or a grove of trees is all that marks the site one hundred years later through which these Army trains passed. The first day out of Fort Mohave they were overnight at Hardyville, then to Packwood Ranch and then to Beals Springs. This is on the north outskirts of Kingman and at one time the water from these springs was used as a source of supply for the city.

But Martha's train pushed steadily on, there was not a city at the site of Kingman in those days. The next camp site was Freeze Wash, this was a short march only 14 miles. The next

day it was 28 miles to Willow Grove Springs, then to Fort Rock and Anvil Rock. This rock still sits there, shaped like the fabulous anvil, thence to Camp Hualapai. By now you are entering the green grass and pine country and Martha stated that this revived her spirits.

The next and last stop in the road was at American Ranch, 10 miles or so north of Fort Whipple and it is now being encroached upon by Prescott suburban homes.

After seven weeks of continuous travel, Fort Whipple seemed like a paradise to Martha, but her journey was far from over. After a days rest they marched on to Camp Verde taking two days. Another company left their ranks and remained at Camp Verde. Martha noted "The Command was now getting deplorably small, I thought, to enter an Indian country for we were now to start for Camp Apache." She continues, "Several routes were discussed, but, it being quite early in autumn, and the Apache Indians being just then comparatively quiet, they decided to march the troops over Crook's Trail, which crossed the Mongollon Rim range and was considered to be shorter than any other." The final leg of the journey she describes in detail for Crook's Trail was little more than that and not by any stretch of the imagination designed for Army wagons. The teamsters reported that a six mule train had rolled down the steep side of the mountain on one occasion, Martha didn't inquire as to what had happened to the mules, and neither did she learn until later that this wagon held most of her precious clothing and household supplies which she had brought with her from the east.

This part of Martha's journey into Arizona Territory was completed on the 4th of October and she describes it "We had crossed the range, and begun to see something which looked like roads. Our animals were fagged to a state of exhaustion, but the traveling was now much easier and there was good grazing, and after three more long days march we arrived at Camp Apache."

There, too, ended the sentimental "Trek" of a score or so of history buffs under the banner of C A M P , in August 1974.

Martha Summerhayes was to spend nearly four years at various posts beginning with Fort Apache and Ehrenberg, Fort McDowell and Fort Lowell.



The route of the 8th Infantry.

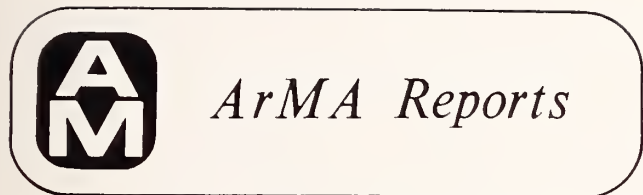
Four years later when the Eight Foot left Arizona Martha observed, "We took supper in Phoenix, at a place known as 'Devine's.' I was hearing a good deal about Phoenix; for even then, its gardens, its orchards and its climate were becoming famous, but the season of the year was unpropitious to form a favorable opinion of that thriving place, even if my opinions of Arizona, with its parched up soil and insufferable heat, had not been formed already."

"We crossed the Gila somewhere below there, and stopped at our old camping places, but the entire valley was seething hot."

"We joined Captain Corliss and the company at Antelope Station, and in two more days were at Yuma City. By this time, the Southern Pacific Railroad had been built as far as Yuma, and a bridge thrown across the Colorado at this point. It seemed an incongruity. And how burning hot the cars looked, standing there in the Arizona sun."

"After four years in that Territory, and remembering the days, weeks and even months spent in traveling on the river, or marching through the deserts, I could not make the Pullman cars seem a reality."

*Martha Summerhayes; Vanished Arizona, 1908 Edition Unabridged, J. P. Lippincott Co., 1963.



THE MINUTES APPEARING IN THIS SECTION HAVE BEEN EDITED TO CONSERVE SPACE. A COMPLETE COPY OF THE MINUTES OF ANY MEETING WILL BE MAILED TO ANY MEMBER REQUESTING THEM.

EXECUTIVE COMMITTEE

The meeting of the Executive Committee of the Arizona Medical Association, Inc., held at 810 West Bethany Home Road, Phoenix, Arizona, on Saturday, September 21, 1974, a quorum being present, convened at 9:59 a.m., William G. Payne, M.D., President and Chairman, presiding.

MINUTES

The minutes of the meeting held July 20, 1974, were approved as distributed.

DEPARTMENT OF HEALTH SERVICES

Dr. Schamadani reviewed with the Executive Committee the status of various programs such as Medicaid, Certificate of Need Problem in Tucson, the Department of Health Services budget, Environmental Problems and the EPA, the Crippled Children's Hospital suit, and abortion.

ARBITRATION — TRAVELERS

Mr. Bill Luby, Claims Manager of the Phoenix Office, and Robert L. Logan, Jr., Manager, Claims Department in the San Francisco office of Travelers Insurance Companies, reviewed the "Monterey Arbitration Project" as a possible program in Arizona.

It was moved and carried to refer this matter to the Medical Economics Committee for study and recommendation.

UNDERWRITING REVIEW

The committee reviewed nine cases under the new loss prevention program.

COMMON CAUSE PETITION

Mr. Robinson reported that a request had been received for funds to support activities in relation to the so-called "Common Cause" petition. However, the matter is currently moot, as the Supreme Court has refused to hear the appeal to reverse a lower court hearing, which in effect keeps the petition off the general election ballot. — RECEIVED.

TESTIMONY IN RAPE CASES

The procedure proposed by the Arizona Hospital Association in relation to handling rape cases in the courts was reviewed and approved by the committee should it get the approval of the courts.

ASSOCIATION FOR INFECTION CONTROL

The letter from the subject organization announcing a conference on March 20-21, 1975, was received for information.

NOMINATING COMMITTEE FOR BLUE SHIELD

It was determined that we should follow previous policy as to staffing the Nominating Committee for Blue Shield.

STUDENT & RESIDENT REPRESENTATIVE AT THE CLINICAL MEETING OF AMA

Student

It was determined to ask Mr. Daniel Fast, President of SAMA, or his representative, to join us as our guest at the Clinical Meeting of AMA.

Resident

It was determined to ask Dr. Timothy Kennedy for a recommendation as to which resident should attend the AMA meeting at our expense.

ARIZONA NURSES' ASSOCIATION — UNION

It was reported that the Arizona Nurses Association had filed its Labor Organization Annual Report with the Department of Labor.

BOARD OF DIRECTORS AGENDA

The committee reviewed the agenda of the Board of Directors meeting scheduled for 9/21/74 and prepared various recommendations.

Meeting adjourned 12:39 p.m.

William E. Crisp, M.D.

Secretary

Bruce E. Robinson

Executive Director

OCCUPATIONAL HEALTH COMMITTEE

The meeting of the Occupational Health Committee of the Arizona Medical Association, Inc., held at 810 West Bethany Home Road, Phoenix, Arizona on October 5, 1974 convened at 1:35 p.m., Joseph M. Hughes, M.D., Chairman, presiding.

MINUTES

The minutes of meeting held February 2, 1974 were approved as distributed.

ANESTHESIA

Donald E. Howland, M.D., President, Arizona Society of Anesthesiology, informed the Committee that the American Society of Anesthesiology will be adopting a new relative value schedule during its next meeting to be held in two weeks. The proposed relative value study is to be a simplified version of the 1973 RVS currently in use. It would be desirable if the I.C.A. would adopt the new relative value schedule for the coming year. Dr. Howland will provide the new RVS to the Committee as soon as it is available.

Dr. Howland further advised that a recent survey of the state anesthesiologists indicate that usual and customary fees are at a conversion factor of \$10 per unit

based on the 1973 ASA-RVS. The Arizona Society of Anesthesiology would, therefore, request the Industrial Commission to set the next years fee schedule at \$10 per unit, plus the modifying units incorporated in the ASA-RVS for emergencies and high-risk patients.

1969 CALIFORNIA RELATIVE
VALUE STUDY

Survey — Use of 1969 CRVS

Mr. Robinson surveyed all states to determine the acceptability of the 1969 CRVS as requested during previous meeting. Summary of the survey is as follows:

Is the 1969 California Relative Value Study used in your state by:

	Yes		No		Qualified	
	Yes	No	Yes	No	Yes	No
A. Blue Cross	7	30	3	2		
B. Blue Shield	8	29	5	3		
C. Part A — Medicare	5	35	3	3		
D. Part B — Medicare	5	36	2	3		
E. Workmen's Compensation						
Carriers	8	31	2	3		
F. Medicaid (Title XIX) Agency	5	33	4	4		

1974 CRVS

Upon inquiry by staff it was learned that the California Medical Association is in the process of developing the next edition of the CRVS. Mr. Michael W. Jones, Staff Coordinator, Committee on Relative Value Studies, informed us of the following. "The general format will be similar to the 1969 edition with one possible exception: no firm decision has yet been made about whether to use a single or multiple unit value in each of the five sections of the book. Also, we will include a professional component in the radiology section of the book. We hope to publish in November; however, completing the task has been more time consuming than we had hoped and we may run a month or two behind schedule."

Thomas-Davis Clinic

Mr. David Zajicek, Administrative Assistant of the Thomas-Davis Clinic, informed the Committee that they are converting to the 1969 CRVS. He advised further that the Tucson Clinic had converted to the 1969 CRVS and it would aid in their operation of the I.C.A. were to adopt the 1969 CRVS as the base for claims processing.

Central Arizona Orthopedic Society

Richard H. Daley, M.D., President, Central Arizona Orthopedic Society, by letter of September 27, 1974 to the I.C.A. requested that I.C.A.:

- "1. Adopt the 1969 California Relative Value fee schedule.
- 2. Increase the fee allowance to a figure comparable to our usual and customary fees for non-industrial patients.

While there may be differences in the fees charged for specific services, the usual and customary is herein intended to imply a conversion factor of 8.5 for surgery and 10.0 for medical treatments, based on the 1964 CRVS and 35 units for surgery on the 1969 CRVS."

It was moved and carried to recommend to the Board of Directors that the Arizona Medical Association petition the Industrial Commission of Arizona to adopt the

1969 California Relative Value Study as a basis of claims processing in place of the 1964 California Relative Value Study currently in use.

I.C.A. FEE SCHEDULE

The Committee compared the present fee schedule by I.C.A., in effect since February 1, 1973, with the fee schedule of the Maricopa Foundation for Medical Care to become effective November 1, 1974 as follows:

	I.C.A. 2/1/73		Foundation 11/1/74	
Medicine	8.0	'64 CRVS	10.0	.64 CRVS
Surgery	7.25	'64 CRVS	8.5	'64 CRVS
Radiology	7.25	'64 CRVS	7.5	'73 Am. Coll of Rad.
Laboratory	6.5	'64 CRVS	6.5	'64 CRVS
Anesthesia	8.0	'70 ASA	8.5	'73 ASA

Mr. Robinson provided the following information on the consumer price index (base established 1/1/67 to equal 100 percent).

Consumer Price Index Information (Base 1/1/67 = 100.0%).

Last I.C.A. schedule increase was 2/1/73 CPI was 128.6
On 7/1/74 CPI was 148.3

Increase 19.7 points or 15.3% increase.

Projected through 2/1/75 using the average increase of 1.2% the Consumer Price Index would have increased 29.3 points or 22.8% since the last increase in the I.C.A. schedule.

It was moved and carried to recommend to the Board of Directors that the Arizona Medical Association petition the Industrial Commission of Arizona to adopt the Conversion Factor against the 1969 California Relative Value Study equivalent to the Maricopa County Foundation for Medical Care fee schedule to be effective November 1, 1974.

Considerable discussion ensued as to the specificity of the above motion.

It was moved and carried to reconsider the previous action.

It was moved and carried to recommend to the Board of Directors that the Arizona Medical Association petition the Industrial Commission of Arizona to adopt a new fee schedule based upon the conversation factors applicable to the 1969 California Relative Value Study which would be equivalent to the following factors applied to the 1964 California Relative Value Study:

Medicine	10.0
Surgery	8.5
Radiology	7.5
Laboratory	6.5
Anesthesia	8.5 — 1973 ASA-RVS

OTHER BUSINESS

Dr. Hughes informed the Committee that the Equal Employment Occupation Commission (EEOC) has informed his company that obesity cannot be a factor in employment. Limited discussion ensued with no action taken.

Meeting adjourned 3:03 p.m.

William E. Crisp, M.D.
Secretary
Gary L. Barnett
Assoc. Exec. Director

BOARD OF DIRECTORS

The meeting of the Board of Directors of the Arizona Medical Association, Inc., held at 810 West Bethany Home Road, Phoenix, Arizona, on Saturday, September 21, 1974, a quorum being present, convened at 1:12 p.m., William G. Payne, M.D., President and Chairman, presiding.

WELCOME

Dr. Payne extended welcome to the County Medical Society presidents, various other guests and Mr. Russ Williams, candidate for Governor of Arizona.

MINUTES

The minutes of the meeting held June 15, 1974 were approved as distributed.

STATE GOVERNMENT & THE MEDICAL PROFESSION

Mr. Russ Williams, candidate for Governor, spoke briefly on his candidacy, his background and his feelings about private industry. He indicated that, among other things, he is interested in reducing the size of government and reducing its power over private citizens' lives. He states that his door will be open to the profession should he be elected.

ArMPAC

Dr. Langston reported that his Board of Directors met September 14, 1974, and distributed most of its funds. Contributions were made to two U. S. Representatives, one U. S. Senator, one gubernatorial candidate, one Attorney General candidate, 13 State representative candidates and eight candidates to the State Senate. He indicated that any member of ArMPAC desiring more detailed information may receive it by writing to: Treasurer, ArMPAC, 810 West Bethany Home Road, Phoenix, AZ 85013.

He announced that ArMPAC is planning its annual banquet for April 24, 1975, as part of the Association's annual meeting in Tucson.

Dr. Langston reported that membership is at an all-time high. He urged that all ArMA Board members vote in the general elections and give serious consideration to becoming a "sustaining" member of ArMPAC during 1975.

BOARD OF DIRECTORS

Central District Director Appointment

It was moved and carried to appoint David C. James, M.D., to fill the unexpired term of Charles C. Finney, M.D., whose term expires in April, 1975.

ArMA Delegate to AMA

Daniel T. Cloud, M.D., submitted his resignation as Delegate to the AMA due to his election to the Board of Trustees of the AMA. The board expressed its appreciation for his many years service. THE RESIGNATION WAS ACCEPTED WITH REGRETS.

It was moved and carried not to appoint a replacement for this position at this time, but to wait until the April, 1975 meeting to elect a replacement. The president was instructed to designate one of the three alternate delegates to be seated as delegate for the 1974 Clinical Meeting of the House of Delegates.

BOMEX Appointment

The President announced that Manus R. Spanier, M.D., Prescott had been appointed to the Board of

Medical Examiners following recommendation by this Association. Term 7/1/74-6/30/79 — RECEIVED FOR INFORMATION.

AMA Resolution 122 — "Violation of Due Process by the University of Arizona"

Dr. DuVal briefly reviewed the current status of the Department of Surgery matter at the University of Arizona College of Medicine. He and Neal A. Vanselow, M.D., Dean, answered many questions on the matter — REPORT RECEIVED FOR INFORMATION.

The President pointed out that the Association has received copies of letters written by Erle E. Peacock, Jr., M.D., to the Joint Commission on Accreditation of Hospitals (9/17/74) and to the Pima County Medical Society (9/18/74). He requested "an investigation by the JCAH into my suspension from hospital privileges at the Arizona Medical Center on February 11, 1974." He asked the Pima County Medical Society to "look into the matter without delay so that their findings of fact in regard to following of ethical due process can be included in the AMA Judicial Council report to be delivered before the AMA Clinical Convention in Seattle (sic) in November, 1974." — RECEIVED FOR INFORMATION.

Resolution 1-74 — Anesthesia Practices

The Chairman reviewed the following letter received from the President of the Arizona Society of Anesthesiologists:

"The Executive Committee of the Arizona State Society of Anesthesiologists met in early August, and, at that time, Doctor Dale F. Webb, of Yuma, the author of Resolution 1-74, could not attend the meeting. He, however, did send representation from Yuma.

The subject matter of Resolution 1-74 was thoroughly discussed, and Doctor Webb's representative informed him of the entire discussion. Following this, I have had a lengthy discussion with Doctor Webb, and he has decided to withdraw Resolution 1-74 from the floor of the House of Delegates.

Certainly, the Arizona State Society of Anesthesiologists has been remiss in the handling of the matter involved in this resolution. I have personally given Doctor Webb my guarantee that the State Society of Anesthesiologists will become very active in the area of this resolve. It seems that there are other areas in the State of Arizona in which the involved problem may currently exist.

Problem areas primarily involved in a given specialty are undoubtedly best handled by the organized society in that specialty, and I personally, representing the Arizona State Society of Anesthesiologists, offer a humble apology for our failure to adequately manage our internal affairs. We certainly do not anticipate that this failure to manage will repeat itself.

We sincerely thank the Arizona Medical Association for the considerate manner in which this problem has been handled."

For clarity, Resolution 1-74 and the action of the House of Delegates taken 4/17/74 is reproduced below: "WHEREAS, There are reports of physicians using nurse anesthetists to administer anesthesia, and then submitting a bill to a patient that has only a physician's name attached, and the bills are said to give no indication

that a person other than the named physician gave the anesthetic, and the fees charged for the anesthesia administered by the nurse in these instances are reported as being the same as those charged by a licensed physician with specialty training in anesthesia; and

WHEREAS, It is stated in the ASA Guidelines to the Ethical Practice of Anesthesiology, paragraph D2 that 'physicians should bill their own patients for the services and only the services which they perform personally . . .'; therefore be it

RESOLVED, That no physician may bill for an anesthetic not given by him unless such bill states that the anesthetic was administered by a nurse anesthetist; and be it further

RESOLVED, That any physician who collects fees for a nurse anesthetist's work without the patient being made aware before and/or after the anesthetic that their anesthesia was given by a nurse anesthetist is unethical; and be it further

RESOLVED, That any physician who collects a fee for a nurse's anesthesia without being immediately available for consultation when the patient is under anesthesia is guilty of unethical practice.

Referred to Board of Directors for action within six months, with report back to next meeting of House of Delegates. 4/27/74"

Mr. Robinson reported that he had confirmed the fact that Dr. Webb did verbally express on 9/19/74 agreement to withdraw the resolution and that such expression would be forwarded in letter form soon.

It was pointed out that Resolution 1-74 was the property of the House of Delegates and withdrawal cannot be accepted except by that body. It was also noted that the resolution directs certain action by the Board of Directors and that the board is obligated to follow that direction.

Extensive discussion ensued, several motions offered, tabled and/or amended, resulting in the following action:

It was moved and carried that this Association advise the Arizona Society of Anesthesiologists that the letter of September 17, 1974 is not a satisfactory response to Resolution 1-74, and that the Board of Directors desires definitive action, speaking to the Resolution, from the Arizona Society of Anesthesiologists. Such action to be received by the Association prior to the next meeting of the Board of Directors scheduled for November 24, 1974.

It was further moved and carried that this Board of Directors take positive action on Resolution 1-74 (as directed by the House of Delegates) at its next meeting irrespective of whether or not we receive a response from the Arizona Society of Anesthesiologists.

EXECUTIVE COMMITTEE

Case Evaluation and Underwriting Review

As requested by the Board of Directors at their 6/15/74 meeting, the President reported that the Executive Committee had reviewed eight cases to date under the new malpractice loss prevention program with the Travelers. A general discussion and explanation of the program ensued. — RECEIVED FOR INFORMATION.

50 Year Club Candidates

It was moved and carried that Walter Brazie, M.D., Kingman, and Harold W. Kohl, Sr., M.D., Tucson be approved for 50 Year Club Membership status.

Membership Classification Changes Approved

1. Cochise County Medical Society

(a) James S. Walsh, M.D. — Active over 70 to Associate — Account Retirement — Dues exempt — Effective 9/10/74.

2. Maricopa County Medical Society

(a) Virgil S. Counseller, M.D. — Active over 70 to Associate — Account Retirement — Dues exempt — Effective 7/24/74.

(b) Oscar W. Thoeny, M.D. — Active over 70 to Associate — Account Retirement — Dues exempt — Effective 9/10/74.

(c) Perry Duncan, M.D. — Active to Associate — Account Retirement — Dues exempt — Effective 8/26/74.

(d) John M. Galbraith, M.D. — Active to Association — Account Retirement — Dues exempt — Effective 7/1/74.

(e) Benjamin Herzberg, M.D. — Active to Associate — Account Retirement — Dues exempt — Effective 7/24/74.

(f) Richard N. Heywood, M.D. — Active to Associate — Account Residency — Dues exempt — Effective 2/7/74.

(g) George H. Jones, M.D. — Active to Associate — Account Retirement — Dues exempt — Effective 8/26/74.

(h) Samuel R. Joseph, M.D. — Active to Associate — Account Retirement — Dues exempt — Effective 8/23/74.

(i) Clair S. Linton, M.D. — Active over 70 to Associate — Account Retirement — Dues exempt — Effective 8/8/74.

(j) Maxwell S. MacCollum, M.D. — Active to Associate — Account Residency — Dues exempt — Effective 2/7/74.

(k) Maurice N. Richter, M.D. — Active over 70 to Associate — Account Retirement — Dues exempt — Effective 8/23/74.

(l) George C. Truman, M.D. — Active to Associate — Account Retirement — Dues exempt — Effective 7/29/74.

(m) Reed D. Shupe, M.D. — Active to Active over 70 — Account Age — Dues exempt — Effective 9/10/74.

(n) Harold Shapiro, M.D. — Active over 70 to Associate — Account Retirement — Dues exempt — Effective 9/10/74.

(o) Paul R. Scallin, M.D. — Active over 70 to Associate — Account Retirement — Dues exempt — Effective 9/10/74.

(p) Norman A. Ross, M.D. — Active to Active over 70 — Account age — Dues exempt — Effective 9/10/74.

(q) Maurice R. Richter, M.D. — Active to Active over 70 — Account age — Dues exempt — Effective 9/10/74.

(r) Francis W. Allinson, M.D. — Active to Active over 70 — Account age — Dues exempt — Effective 1/1/75.

(s) A. Carl Armbruster, M.D. — Active to Associate — Account Retirement — Dues exempt — Effective 9/6/74.

(t) Lucille Dagres, M.D. — Active to Active over 70 — Account age — Dues exempt — Effective 1/1/75.

(u) DeForest R. Hastings, M.D. — Active over 70 to Associate — Account Retirement — Dues exempt — Effective 9/10/74.

(v) Doris F. Hopkins, M.D. — Active to Associate — Account Retirement — Dues exempt — Effective 9/10/74.

(w) Irene M. Josselyn, M.D. — Active to Active over 70 — Account Age — Dues exempt — Effective 1/1/75.

(x) C. C. Piepergerdes, M.D. — Active to Active over 70 — Account Age — Dues exempt — Effective 1/1/75.

(y) Dwight Porter, Sr., M.D. — Active over 70 to Associate — Account Retirement — Dues exempt — Effective 9/10/74.

(z) Edward Roth, M.D. — Request for continued dues exemption for 1975 — Account financial hardship — Effective 1/1/75.

(a-1) Durant Smith, M.D. — Active to Active over 70 — Account Age — Dues exempt — Effective 1/1/75.

(a-2) Marcy L. Sussman, M.D. — Active to Active over 70 — Account Age — Dues exempt — Effective 1/1/75.

(a-3) Lloyd K. Swasey, M.D. — Active to Active over 70 — Account Age — Dues exempt — Effective 1/1/75.

(a-4) J. H. Williams, M.D. — Active to Associate — Account Retirement — Dues exempt — Effective 9/11/74.

(a-5) Donald G. Carlson, M.D. — Active to Active over 70 — Account Age — Dues exempt — Effective 1/1/75.

(a-6) Vladimir deBerg, M.D. — Active to Active over 70 — Account Age — Dues exempt — Effective 1/1/75.

(a-7) Martin J. Ryan, M.D. — Active over 70 to Associate — Account Retirement — Dues exempt — Effective 9/12/74.

3. Yavapai County Medical Society

(a) Harry T. Southworth, M.D. — Active to Associate — Account Retirement — Dues exempt — Effective 1/1/75.

AD HOC COMMITTEE TO REPEAL PSRO

Appointment Confirmation

It was moved and carried to confirm the appointment of the following to the Subject Committee.

James M. Hurley, M.D., Chairman

Richard S. Armstrong, M.D.

Bruce N. Curtis, M.D.

Donald F. Griess, M.D.

Clifford J. Hoffman, M.D.

Patrick P. Moraca, M.D.

Robert L. Nelson, M.D.

James L. Parsons, M.D.

Ted J. Stuart, Jr., M.D.

PSRO National Advisory Council

Dr. DuVal, member of the National Advisory Committee, reviewed the activities of the council, which is

composed of eleven physicians and which meets about every six weeks. He stated that they had been involved in the area designation problem (203 areas designated) and that all but six states are involved, Arizona being one of the six. That 115 contracts had been negotiated for planning, conditional and statewide support centers.

Work is proceeding in such areas as pre-admission certification, model treatment criteria, long term care facilities, the program review team concept, and others.

He expressed great concern over the direction of the matter of confidentiality of patient records, and hopes to change that.

He stated that due to budget cuts contemplated by the Congress, the program could be seriously curtailed. The budget decision being made by the Congress could have marked impact on the outcome of the program.

BENEVOLENT & LOAN FUND COMMITTEE

1974 Scholarships

The President reported that ArMA \$500.00 scholarships have been granted to the following:

Armando C. Angel — University of Arizona

Edgar H. Hernandez — University of Utah

Michael Nugent — University of Arizona

Richard D. Ranne — University of Arizona

and that Blue Shield has awarded two \$500.00 Robert Carpenter scholarships to:

Gregory A. Skipitis

Joyce J. Steiner

Letters of appreciation have been received — RECEIVED FOR INFORMATION.

FINANCE COMMITTEE

In the absence of the Treasurer, Mr. Robinson reported on the financial statement for the period ending 8/31/74 — RECEIVED.

HEALTH MANPOWER COMMITTEE

Transfer of Section on Rural & Migrant Health

It was moved and carried to transfer the Sub-Committee on Rural and Migrant Health of the Section on Public Health of the Professional Committee to be the Section on Rural and Migrant Health of the Health Manpower Committee in order to bring about a more efficient and effective program to work toward solution of the health manpower problems in Arizona.

Appointment Confirmation

It was moved and carried to confirm the appointment of Andrew W. Nichols, M.D., as a member of the Health Manpower Committee. Term 3 years.

Survey of Rural Physicians

It was moved and carried to endorse a survey of rural physicians proposed by Thomas J. Stewart, M.D., Director, Research and Evaluation of the Navajo Health Authority. Such support to include mention in Medical Memos, but no other financial obligation.

LEGISLATIVE COMMITTEE

The letter from the Chairman of the Arizona Chapter, American Academy of Pediatrics, expressing appreciation to the Association for assistance with enactment of newborn legislation was received for information.

MATERIAL & CHILD HEALTH CARE COMMITTEE

Position on Fluoridation

It was moved and carried that this Association adopt the following statement as its position on fluoridation of community water supplies:

"WHEREAS, Dental disease is the most prevalent of all diseases in our children, 95% of our school children have multiple tooth decay, 50% of our children have malocclusion often as a result of dental disease, thousands of our children suffer infection, pain and discomfort from dental disease resulting in the loss of untold hours from school; and

WHEREAS, Prevention is always the treatment of choice for any disease, both from an economic and comfort standpoint; and

WHEREAS, Fifty years of research and twenty-eight years of practical experience has shown that the adjustment of the fluoride content of communal water supplies to the optimal level is a safe, economical and simple public health measure resulting in the two-thirds reduction of dental decay in children born and raised in optimally fluoridated communities; and

WHEREAS, Evidence indicates that the benefits obtained from optimally fluoridated water carry over into adulthood; therefore be it

RESOLVED, That the Arizona Medical Association endorses the concept of appropriately monitored community water fluoridation as a safe, economical and efficient measure for preventing dental disease.

Functional Procedures for the Arizona State Community Coordinated Child Care Planning Committee — Request for Endorsement

It was moved and carried to refer recommendation of endorsement of this matter back to the parent committee, requesting that they reconsider the matter in conjunction with official representatives of the Arizona Chapter, American Academy of Pediatrics and the Arizona Academy of Family Physicians.

MEDICAL EDUCATION COMMITTEE

CESA

The Board reviewed the letter from the subject committee dated 9/5/74 which was in response to the Board's request (letter of 6/19/74) for recommendations on the support of CESA. The committee reported as follows:

"Correspondence was received by the Medical Education Committee from John T. Condon, Ed.D., Associate Director, CESA, informing the Association that on June 30, 1974 the ArMA/CESA project would terminate. The CESA objectives and functions have been taken over by the office of the Vice President for Health Services, University of Arizona, and a proposed grant has been submitted to Washington, D. C. for funding from September 1, 1974 through June 30, 1975.

It is suggested that the Board of Directors receive the request from the Arizona Regional Medical Programs for information only." — RECEIVED FOR INFORMATION.

Certificate in CME — Status Report

Mr. Barnett reported that, to date, a total of 123 members have not complied with CME requirement . . .

61 are from Maricopa County, from which 22 have not been heard and 39 have submitted partial applications or letters of extenuating circumstances or promises.

52 are from Pima County, from which 28 have not been heard, and 24 have submitted partial applications or letters of extenuating circumstances or promises.

10 are from the other counties, from which 4 have not been heard and 6 have submitted partial applications or letters of extenuating circumstances or promises.

We have received two letters of resignation from Pima County.

We have indications of two others from Pima County who intend to resign. Another Pima County physician resigned, then rescinded his resignation.

We are holding six applications which were submitted without the required \$10.00 fee.

The Medical Education Committee is meeting September 30th to finalize its list for submittal to the Grievance Committee.

Mr. Barnett stated that all County Medical Societies have been advised of those members who have not fulfilled the CME requirement as of 9/20/74 — RECEIVED FOR INFORMATION.

PROFESSIONAL COMMITTEE

The Physician and the Dying Patient — Policy Statement

It was moved and carried to adopt the following statement as the official position of this Association:

"The intentional termination of the life of one human being by another — mercy killing — is contrary to that for which the Medical Profession stands and is contrary to the policy of the Arizona Medical Association.

The cessation of the employment of extraordinary means to prolong the life of the body when there is irrefutable evidence that biological death is imminent is the decision of the patient and/or his immediate family. The advice and judgment of the physician should be freely available to the patient and/or his immediate family. When a decision is made to discontinue or discontinue extraordinary means to sustain life, ordinary means of sustaining life will be continued."

Relationship with Another Physician's Patient — Policy Statement

It was moved and carried to adopt the following statement as the official position of this Association:

"It is improper to interfere directly or indirectly, or to invite or encourage interference in another physician's relationship with and management of his patient, except through established physician or hospital review and control mechanisms or through duly constituted or appropriate legal processes. Indirect interference includes the utilization of public announcements, appeals to special interest organizations, and the use of the press or other non-professional or non-legal means. Such interference would be considered unethical."

Registration of Detail Men & Prohibiting Distribution of Unsolicited Drug Samples

It was moved and carried to refer this matter to the Legislative Committee for consideration of active support of this type of legislation.

Extended Role of the Nurse — Proposed rules

It was pointed out that this Association has made numerous recommendations to the Arizona State Board

of Nursing regarding the "Criteria for Establishing Courses in Study for the Extended Role in Nursing in Arizona and Family Nurse Practitioner — Draft #5" — which have essentially been ignored.

It was moved and carried to endorse the Committee's recommendations regarding this matter and that the Joint Boards of Medical Examiners be advised of these recommendations, urging their inclusion before the Rules and Regulations are adopted by the Joint Boards.

Commendation of John G. Lingenfelter, M.D.

It was moved and carried that John G. Lingenfelter be commended for his efforts in supporting the experimental use of a physician's assistant in the Dolan Springs Area.

Advisory Committee to the Department of Health Services on Paramedics

Dr. Ganelin reported that Dr. Donald F. Schaller, Chairman, Section on Emergency Care of the Professional Committee, reported that his Section has accepted the responsibility of being the official medical advisory committee to assist the Department of Health Services in the development and implementation of the provisions mandated in House Bill 2001 (Paramedic Bill) adopted during the special session of the Arizona Legislature.

Dr. Schaller further reported that the initial meeting of the Section on Emergency Care was held the morning of September 7, 1974 and that membership will include representatives of the Osteopathic Medical Association.

Resignation of Frederick J. Brady, M.D.

Dr. Brady's resignation as Chairman of the Section on Public Health was received with regret. The President will soon appoint a replacement in consultation with the Chairman of the Professional Committee. — RECEIVED.

AMA DELEGATE REPORT

Dr. Shapiro, Senior Delegate to the AMA, reported briefly on the June meeting and then turned it over to Daniel T. Cloud, M.D., former Delegate who reviewed the activities of the Board of Trustees of the AMA, to which he was recently elected.

Dr. Dudley reported as follows:

"The prime item of business at the Annual Scientific Convention was to be PSRO — Repeal or Cooperate. Four reports and twenty-five resolutions were introduced on this matter and an entire afternoon was spent in Reference Committee. The Reference Committee combined all of these reports and resolutions and submitted its own substitute resolution which has been widely publicized. Basically it rectifies the errors made in the stand taken at Anaheim in December, 1973, and instructs the Board of Trustees to direct its efforts to achieve constructive amendments to the PSRO law, to allow the profession to perform peer review in accordance with the profession's philosophy, that these states who elect non participation should be urged to develop effective non PSRO programs and, finally, if on going evaluation reveals that the law does affect the quality of patient care Board of Trustees be instructed to use all legal and legislative means to rectify these shortcomings. As the report was being given on the floor and by a parliamentary maneuver by Dr. William Hildebrand of Wis-

consin further debate on the floor by the entire House was halted by calling for the question. This passed overwhelmingly.

During Reference Committee meetings I monitored Reference Committee D (hospitals and medical facilities). Major items coming out of this committee were as follows:

1. AMA opposition to blanket pre-admission certification for all patients by governmental or hospital edict.

2. Passage of Resolution 63 which encourages local societies to establish mechanisms for liaison between hospital medical staffs and the society and for the society to become more effective spokesmen for physicians in their dealings with hospitals and other health care providers.

3. Adoption of Resolution 82, which called for clarification of the "Darling Decision" so that both physicians and administration may have clarification of the erroneous interpretations that have been made on this case as it affects the profession and the hospital.

4. AMA encouraged the JCAH to continue to disseminate information to hospitals and hospital medical staffs that delineation of hospital staff privileges in minute detail is not required by the JCAH.

The interns and residents introduced a late resolution seeking to censure the University of Arizona in its handling of the "Doctor Erle Peacock Affairs." This resolution was not adopted as the Reference Committee felt it was not proper AMA business, which should be handled on a local basis.

To me the highlight of the whole meeting was the campaign and election of Dan Cloud as a member of the Board of Trustees. I was fortunate (?) enough to be a teller at this meeting. Under the simultaneous election procedure it was necessary to have fourteen ballots on the closing day. Despite the late hour out of 249 delegates there were still 204 delegates in attendance on the fourteenth ballot.

Of most interest in Dan's election was the fact that on the first ballot he failed of election by only four votes. On the next three ballots, as the bottom man was eliminated he maintained top strength over the other men running for office and on the fifth ballot was elected as a member of the Board of Trustees. Considering that Arizona has but three delegates (of 249), it is obvious that the entire House of Delegates recognized a new, young, dynamic individual to represent American medicine as a member of the Board of Trustees. As only one incumbent trustee was re-elected I feel the House of Delegates has certainly given the new Board their idea that they did not like the way AMA had represented them in the past and that more vigorous meaningful representation was necessary in the future."

Mr. David Gullen, President of the Arizona Chapter of SAMA, who also attended the meeting as a representative of the Association, submitted this report:

"I would like to extend my deepest thanks and appreciation to the members of the Association and to you and Gary Barnett in particular. Attending the Convention was both stimulating, educational, and motivating. Because of the kindness of all members of the Arizona Delegation, I felt very accepted and much at home. Please convey my thanks to the members of the Association.

I hope to be able to present some of the information and materials gained from the Convention to my fellow students in the future. So, if needed, I may have to request appropriate brochures about ArMA and the AMA." **AMA Resolutions — Deadline**

Dr. Payne reported that October 31st was the deadline for submitting resolutions for consideration at the Clinical Meeting to be held in Portland — RECEIVED.

OTHER BUSINESS

Housestaff Affairs

Timothy C. Kennedy, M.D. — Fellow at the University of Arizona College of Medicine, was introduced and discussed relationships between ArMA and housestaff. He made several recommendations:

1. That the Association should survey the various intern and residency programs to determine the existence, size, goals and objectives of housestaff organizations in Arizona.

2. That the Association consider the possibility of sending one housestaff representative from Tucson and one from Phoenix to the AMA meetings. Selection of the individuals to be made from recommendations of the appropriate housestaff organization.

3. That the Medical Education Committee, particularly the Section on Graduate Medical Education, consider the desirability of having a housestaff representative on the committee.

4. That some way be developed so that housestaff organizations could have representation on the Association's House of Delegates.

Considerable discussion ensued and questions asked. It was the general sense that these suggestions had merit and should be pursued. The need and value of integrating housestaff officers into organized medicine in Arizona was overwhelmingly expressed many times.

It was determined to consult with Jack M. Layton, M.D., Chairman of the Section on Graduate Medical Education about the matter of having housestaff input on his committee.

It was moved and carried to ask the Article of Incorporation & Bylaws Committee to prepare Bylaw changes that would establish housestaff representation in the Association's House of Delegates utilizing the AMA as a possible model.

Medical Planning

Dr. Reed, Chairman of the Section on Medicaid of the Governmental Service Committee, reported on the first meeting of his newly activated section. Copies of the minutes of the organizational meeting held September 12, 1974, are available upon request from Mr. Robinson. — RECEIVED FOR INFORMATION.

Regulations on Radioactive Pharmaceuticals

Dr. Scott reviewed the problems anticipated by formulation of regulations dealing with radioactive pharmaceuticals and the practice of medicine are requested by S. V. Hiltz, M.D., member of the Medical Advisory Committee, Arizona Atomic Energy Commission. The proposed regulations are as follows:

"NUCLEAR PHARMACY PERMITS AND RADIOACTIVE PHARMACEUTICALS"

5.2200 Definition: A radioactive pharmaceutical, radioactive drug or radioactive biological is any drug that is radioactive.

NUCLEAR PHARMACY PERMITS TO HANDLE RADIOACTIVE PHARMACEUTICALS

6.7960 General: Radioactive pharmaceuticals require specialized techniques in their handling and testing in order that correct results may be obtained and hazards to personnel be minimized. Therefore, radiopharmaceuticals shall not be stocked, manufactured, transferred or handled by any person or firm, except by a pharmacy or manufacturing permit from the Board of Pharmacy specifically stating the permit pertains to radioactive pharmaceuticals, or by a medical practitioner according to A.R.S. Section 32-1921-1.

6.7961 A permittee for radioactive pharmaceuticals shall require that only a pharmacist, or a pharmacy intern under his immediate supervision, shall dispense such drugs.

6.7962 All the laws and regulations of the Arizona Atomic Energy Commission and the U. S. Atomic Energy Commission including emergency and safety provisions shall be complied with, in addition to compliance with all the federal and state laws and regulations governing non-radioactive drugs.

6.7963 Education, experience and licensing requirements of the Arizona Atomic Energy Commission shall be complied with.

6.7964 Security: All radioactive substances shall be kept locked and secure from unauthorized personnel.

6.7965 Transfer of drugs: Radioactive pharmaceuticals shall not be transferred to any person or firm not licensed or authorized to receive such drugs.

6.7966 A permittee for radioactive pharmaceuticals shall be responsible for the purity, sterility, efficacy and non-pyrogenicity of all drugs or biologicals dispensed or manufactured.

PHARMACY PERMIT FOR RADIOACTIVE PHARMACEUTICALS

6.7970 The following minimum requirements shall be met for a retail pharmacy or hospital pharmacy compounding and dispensing radioactive pharmaceuticals. These requirements are in addition to the minimum requirements for space and equipment for other types of pharmacies and the requirements of the Federal Atomic Energy Commission regulations, and the applicable regulations of the Federal Food and Drug Administration. The board may, if requested, waive regulations pertaining to pharmacy permits for non-radioactive drugs for requirements that do not pertain to the practice of nuclear pharmacy.

Space:

- The area for the storage, compounding and dispensing of radioactive drugs shall be completely separate from pharmacy areas for non-radioactive drugs.
- Hot lab and storage area shall be a minimum of 100 square feet.
- Compounding and dispensing area shall be a minimum of 400 square feet.

Equipment:

- Fume hood — minimum of 30 inches.
- Laminar flow hood.
- Dose calibrator.
- Refrigerator (lead shielded).
- Electronic balance, or access to one.

- f. Spectrophotometer.
- g. Drawing station (lead glass and lead).
- h. Glassware
 - (1) 6 breakers 50ml
 - (2) 6 breakers 150ml
 - (3) 2 breaker 500ml
 - (4) 8 volumetric flasks 50ml
 - (5) 12 volumetric flasks 100ml
 - (6) 4 graduated cylinders 10ml
 - (7) 4 graduated cylinders 100ml
- i. Radiochromatographic strip scanner and/or well counter
- j. Incubator oven.
- k. Autoclave.
- l. Pyrogen oven.
- m. Other equipment as required by the Arizona Atomic Energy Commission.

Supplies:

- a. Disposable syringes 1, 3 and 5cc.
- b. Multidose vials 10, 20 and 30 cc.
- c. Disposable alcohol swabs.
- d. Disposable gloves.
- e. Appropriate labels for radioactive drugs.
- f. Other supplies as needed for quality control procedures.

Current References:

- a. Arizona Revised Statutes, Section 32-651 through 30-687 pertaining to the Atomic Energy Commission.
- b. Regulations of the Arizona Atomic Energy Commission.
- c. Regulations of the U. S. Atomic Energy Commission.
- d. United States Pharmacopeia and National Formulary, or Remington, or United States Dispensary, the latest edition and supplements.
- e. American Hospital Formulary Service.
- f. Arizona Pharmacy Act and Regulations.
- g. Arizona Narcotic Act.
- h. Radiology Health Handbook.
- i. P.D.R. for Radiology and Nuclear Medicine.
- j. Handbook of Chemistry and Physics.
- k. Trilinear Chart of the Nuclides.
- l. Table of Isotopes by Lederer.

6.7971 Education and Experience: In addition to that required by the Arizona Atomic Energy Commission, a pharmacy permittee for radioactive pharmaceuticals shall present to the board certification from an accredited college of pharmacy that the responsible pharmacist for the radioactive pharmaceuticals has completed a minimum of three months on-the-job training under a licensed program approved by the board.

PERMIT TO MANUFACTURE RADIOACTIVE PHARMACEUTICALS

6.4800 The following minimum requirements, in addition to regulations pertaining to the manufacture of other drugs, shall be met before manufacturing a radioactive pharmaceutical. These requirements are in addition to the regulatory requirements of the Arizona Atomic Energy Commission and the U. S. Atomic Energy Commission and the Federal Food and Drug Administration regulations.

Space:

The radiopharmaceutical manufacturing or preparation area, separate and apart from other areas, shall be an undivided area of not less than 1,000 square feet with an additional minimum of 200 square feet for the hot lab and storage area. The area shall contain adequate sink with hot and cold water facilities.

Minimum equipment and accessory standards:

- Fume hood — minimum of 20 inches.
- Laminar flow hood.
- Dose calibrator.
- Refrigerator (lead lined)
- Mettler balance.
- Spectrophotometer.
- Drawing station (lead glass and lead).
- Glassware.
 - 6 beakers 50ml.
 - 6 beakers 150ml.
 - 2 beakers 500ml.
 - 4 volumetric flasks 50ml.
 - 12 volumetric flasks 100ml.
 - 4 graduated cylinders 10ml.
- Radiochromatographic strip scanner, well counter, scaler and multichannel analyser.

Supplies:

- Disposable syringes 1, 3 and 5cc.
- Multidose vials 10, 20 and 30cc.
- Disposable alcohol swabs and gloves.
- Appropriate supplies for quality control.
- Other equipment and supplies as required by the Arizona Atomic Energy Commission.

Reference Books:

- a. Arizona Revised Statutes, Section 32-651 through 30-687 pertaining to the Atomic Energy Commission.
- b. Regulations of the Arizona Atomic Energy Commission.
- c. Regulations of the U. S. Atomic Energy Commission.
- d. United States Pharmacopeia and National Formulary, or Remington, or United States Dispensary, the latest edition and supplements.
- e. American Hospital Formulary Service.
- f. Arizona Pharmacy Act and Regulations.
- g. Arizona Narcotic Act.
- h. Radiology Health Handbook.
- i. P.D.R. for Radiology and Nuclear Medicine.
- j. Handbook of Chemistry and Physics.
- k. Trilinear Chart of the Nuclides.
- l. Table of Isotopes by Lederer.

6.4804 Education and Experience: In addition to the education and experience required by the Arizona Atomic Energy Commission, a permittee to manufacture radioactive pharmaceuticals shall present to the board certification from an accredited college of pharmacy that the responsible pharmacist for the manufacturing of radioactive pharmaceuticals has completed courses in nuclear pharmacy or has completed a minimum of three months on-the-job training under a licensed program approved by the board, and further shall pass an examination given by the board on good manufacturing practices.

6.4805 Food and Drug Administration Registration: A manufacturer of radioactive pharmaceuticals shall register with the Federal Food and Drug Administration."

The following is Dr. Hilts' memo on the above:

"The enclosed draft (reproduced above) (and subsequent ones which have been quoted by phone) has the potential to interfere seriously with the practice of Nuclear Medicine by physicians. Par. 6.7960 refers to ARS section 32-1921-1, dealing with the use of ordinary drugs by physicians. This exception is in no way adequate.

The usual practice of Nuclear Medicine involves the delegation by physicians to technicians of the preparation of radiopharmaceuticals, both by "milking" (extraction) from generators and the use of kits provided by suppliers. These probably constitute manufacturing, certainly at least compounding. The preparations are then injected, also by technicians for whom the physician is responsible. Any change in this would make practice of Nuclear Medicine nearly impossible. THESE PREPARATIONS ARE WITHOUT HAZARD OR SIDE EFFECTS, and must be proven so to be approved.

This draft has been discussed by all practitioners of Nuclear Medicine in Tucson, and by members of the Medical Advisory Committee to the Arizona Atomic Energy Commission. It is our strong feeling that any such act should include language indicating that nothing in this act can be construed as requiring a licensee of the AEC to maintain a radiopharmacy, or interfering with the use of radiopharmaceuticals by qualified physicians, including their right to delegate such preparation to personnel other than pharmacists.

It is further our opinion that many of the requirements in the draft are totally unrealistic even for radiopharmacies, and that adequate opportunities for hearings, TO BE CONDUCTED IN THE METROPOLITAN AREAS where almost all licensees reside and can attend, should precede any adoption. It is impossible for adequate public exposure to interested parties to be obtained in Kingman, and we feel that an effort to avoid such exposure must be suspected.

It is requested that ArMA endorse the above views to whatever extent possible, and that such endorsement reach the State Board of Pharmacy prior to the hearing. We have had this for only 10 days, and had hoped these matters would be changed at staff level, but this is not forthcoming."

It was moved and carried that the Board of Directors express concern to the Arizona State Board of Pharmacy that the proposed regulations on Radioactive Pharmaceuticals would interfere with the practice of Nuclear Medicine. It is requested that additional public hearings on these Regulations be held either in Phoenix or Tucson before any action to adopt them is taken by the Arizona State Board of Pharmacy.

Meeting adjourned 5:44 p.m.

William E. Crisp, M.D.
Secretary
Bruce E. Robinson
Executive Director

SCIENTIFIC ASSEMBLY COMMITTEE

The meeting of the Scientific Assembly Committee of the Arizona Medical Association, Inc., held Saturday, September 28, 1974, at 810 West Bethany Home Road, Phoenix, Arizona, convened at 1:21 p.m., Donald J. Ziem, M.D., Chairman, presiding.

MINUTES

The minutes of the meeting held June 1, 1974, were approved as distributed.

1977 MEETING

Mr. Robinson reported that he had obtained, as requested, tentative confirmations at the Braniff Place in Tucson, and at the Safari Hotel for the 1977 meeting. Final decision on location to be made following the 1975 meeting. — RECEIVED.

1976 MEETING

Mr. Robinson reported that the University of Utah College of Medicine has agreed to provide the scientific program for the 1976 meeting. — RECEIVED.

TENNIS GOLF CHAIRMANSHIPS

It was reported that Samuel G. Grabb, M.D., would chair the Tennis Tournament and Seymour I. Shapiro, M.D., would chair the Golf Tournament.

SOCIAL FUNCTIONS

The following social functions were approved.

Wednesday 4/23/75 — Steak Fry at "Old Tucson."

Thursday, 4/24/75 — ArMPAC Banquet.

Friday, 4/25/75 — President's Banquet with a Fiesta Theme.

BOARD OF DIRECTORS ACTIONS

The following actions by the Board of Directors were received:

"It was moved and carried to adopt the practice of alternating the Annual Meetings between the Tucson and Phoenix areas, should the 1975 meeting in Tucson be satisfactory.

It was moved and carried that there be no change in the present format of the Annual Meeting, and that the House of Delegates continue to meet on Tuesday afternoon and again on Saturday morning.

It was moved and carried that exhibits at future Annual Meetings be limited to commercial or scientific exhibits only."

AMERICAN ASSOCIATION OF MEDICAL ASSISTANTS

AMA Resolution 109 (A-74)

The subject Resolution, the resolved portions of which read as follows, was received for information.

"Resolved, That the American Medical Association hereby commends the American Association of Medical Assistants for their devotion and accomplishments in the field of medical assistant education, both locally and nationally; and be it further

Resolved, That the American Medical Association requests all state medical associations to continue active, formal support of this organization and further urges individual physicians to pay the dues of their medical assistants so that membership in this most important and worthwhile organization will continue to grow."

Request for booth space

It was moved and carried to approve the request of the American Association of Medical Assistants for a booth in the Scientific Exhibit area.

Request to address House of Delegates

It was moved and carried to approve the request of the American Association of Medical Assistants' Past-President to address the House of Delegates on April 22, 1975.

PRINTED PROGRAM FORMAT

Dr. Anand's request to change the format of the printed program was discussed. It was determined that additional pages were to be added to the program in such a way as to make it possible to see a whole day's schedule at a glance.

SCIENTIFIC PROGRAM

The following program items were agreed upon:

Wednesday, 8:00 a.m. — Joint Husband/Wife Program
Title: "The Great Debate" — the pros and cons of hysterectomy for sterilization.

Suggested Speakers:

Ralph Reese, M.D.

Harold Visotsky, M.D.

And others to be chosen.

Thursday, Breakfast Panel

Title: "Physician's Assistants and How to Use Them"

Speakers:

To be selected.

Friday Breakfast Panel

Title: "The American Indian School of Medicine and Indian Health"

Speakers:

Senator Paul Fannin

Taylor McKenzie, M.D., Dean

Irvin E. Hendryson, M.D.

Anne D. Wauneka, Ph.D.

Mr. Melvin Gardner — Ganado

Sidney Kemberling, M.D.

Mrs. Jean Chandhuri, Director,

Traditional Indian Alliance of Tucson

Moderator:

George Bock, M.D.

Thursday & Friday General Sessions

The following speakers and topics from Northwestern were agreed upon. Specific time periods to be set by the Chairman:

Dr. John Bergan

Professor of Surgery

1. Non-Invasive Techniques in the Diagnosis of Peripheral Vascular Disease.
2. Indications For, and Results of Renal Transplantation.

Dr. Henry Betts

Chairman, Department of Rehabilitation Medicine

Director, Rehabilitation Institute of Chicago

1. The Roles of Rehabilitation Medicine in a Medical Center.
2. Rehabilitation in Diseases of the Cardiovascular System.
3. New Techniques and Devices in Rehabilitation of the Quadriplegic or Paraplegic Patient.

Dr. James Eckenhoff

Dean

Professor of Anesthesiology

Formerly Chairman, Department of Anesthesiology

1. The Selection of Anesthetics for the Chronically Ill Patient.
2. The Hazards of General Anesthetics.
3. The Evaluation and Management of Pain.
4. The State of Medical Education Today and a Look at the Future.

Dr. John Grayhack

Chairman, Department of Urologic Surgery

Chief, Urology, Passavant Pavilion, Northwestern Memorial Hospital

1. Scrotal Swelling.
2. Urinary Trace Dysfunction.
3. Renal Transplant.

Dr. James R. Hines

Professor of Surgery

Surgeon-in-Chief Wesley Pavilion, Northwestern Memorial Hospital

1. Surgical Treatment of Peptic Ulcer and Its Complications.
2. Diagnosis and Treatment of Malignancies of Colon, Rectum and Anus.
3. Diagnosis and Treatment of Breast Disorders.

Dr. Sheridan Meyers

Associate Professor of Medicine

- Chief, Heart Station, Northwestern Memorial Hospital
1. Invasive and Non-invasive Techniques in the Diagnosis of Cardiac Disease.
 2. Criteria for the Selection of Patients for Coronary Artery By-pass.
 3. The CCU and the Para-professional in the Small Hospital.

Dr. Henry Nadler

Chairman, Department of Pediatrics
Chief of Staff, Children's Memorial Hospital

1. Genetic Counseling.
2. Growth Retardation.
3. Pediatric Trauma (Child Abuse Syndrome).

Dr. Roy Patterson

Chairman, Department of Medicine

1. Current Concepts in the Treatment of Allergic Disorders.
2. Newer Immunologic Disorders and Their Treatment.
3. Status Asthmaticus.
4. Food Allergy.

Dr. Frank Schmidt

Professor of Medicine
Chief, Section on Rheumatology

1. The Arthritides – Diagnosis and Treatment.
2. The Differential Diagnosis and Treatment of Collagen Diseases.

Dr. David Shoch

Chairman, Department of Ophthalmology

1. The Inflamed Eye.
2. Common Eye Disorders.
3. The Eye in Systemic Disease.

Dr. George Sisson

Chairman, Department of Otolaryngology

1. Swelling of the Head and Neck.

Dr. Harold Visotsky

Chairman, Department of Psychiatry, Medical School and Northern Memorial Hospital

1. A Crisis Intervention Program for the Teen-age Patient.
2. The Many Faces of Depression.
3. The Causes and Prevention of Drug Abuse.

Other Panels

It was suggested that the Arizona Kidney Foundation be asked to put on a panel entitled "Organ Transplants – Laws and Criteria." They are also to be asked to put on a scientific exhibit on the same subject.

Meeting adjourned 3:21 p.m.

William E. Crisp, M.D.
Secretary
Bruce E. Robinson
Executive Director

Arizona Medicine and The U.S. Bicentennial Society invite you to Fly the Flag for the Bicentennial.



We invite our readers to take part in the greatest show of colors this country has ever seen. We are proud to take part in this national campaign to restore the flag to a place of respect and honor it deserves.

To encourage you to fly the flag, we have arranged for you to purchase a complete Bicentennial Flag Kit for only \$8.95, including handling and shipping. The large quantities of flags involved makes this possible. Order the 50-Star Bicentennial Flag with the special Fly the Flag coupon. Also available: 13-Star Betsy Ross Flag and the Bennington '76 Flag. Your flag will be sent directly to your home at no additional charge.

Each flag is crowned with the golden Double Eagle top ornament, symbol of the Bicentennial. Matching goldenized 6 ft., two-piece, steel pole. Heavy-duty flag—3 x 5 ft.—with double-stitched stripes, canvas heading and brass grommets. Complete with sturdy metal wall-mount bracket, 3 mounting screws, rope halyard, mounting instructions, and self-storage corrugated box.

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Future Medical Meetings

CONTINUING MEDICAL EDUCATION

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GODD SAMARITAN HOSPITAL, PHOENIX
MARICOPA COUNTY GENERAL HOSPITAL, PHOENIX
ST. LUKE'S HOSPITAL AND MEDICAL CENTER, PHOENIX
ST. JOSEPH'S HOSPITAL AND MEDICAL CENTER, PHOENIX
TUCSON HOSPITALS MEDICAL EDUCATION PROGRAM, TUCSON
VETERANS ADMINISTRATION CENTER, PRESCOTT

CONTINUING MEDICAL EDUCATION ACTIVITIES SPONSORED BY THESE INSTITUTIONS RECEIVE CATEGORY 1 CREDIT FOR THE ArMA CERTIFICATE IN CONTINUING MEDICAL EDUCATION AND THE AMA PHYSICIAN'S RECOGNITION AWARD.

HYPERKINESIS AND LEARNING DISABILITIES LINKED TO THE INGESTION OF ARTIFICIAL FOOD FLAVORS AND COLORS and LEARNING DISABILITIES: THE ONLY ILLNESS DIAGNOSED BY THE DOCTOR AND CORRECTED BY THE TEACHER

November 15, 1974
Holiday Inn, Tempe, AZ

SPONSOR: Arizona Association for Children
with Learning Disabilities

CONTACT:
Miss Carter
1096 E. Thomas, A-1
Phoenix, AZ

Approved for 3 required hours toward the ArMA Certificate in Continuing Medical Education.

PRESCOTT VETERANS ADMINISTRATION CENTER Continuing Medical Education Program

1:30 p.m., Building 28, VAC Prescott, AZ

November 14—Neurological Problems
November 21—Urology Conference
December 5—Clinical Pharmacology Conf. on
Antibiotics
December 12—Pulmonary Conference
December 19—Associated Rheumatological
Diseases
December 20—Associated Rheumatological
Diseases

SPONSOR: Veterans Administration

CONTACT:
Charles A. Trahern, M.D.
Coordinator, Continuing Medical Educ.
Veterans Administration Center
Prescott, AZ 86301

Approved for 1½ required hours per session toward the ArMA Certificate in Continuing Medical Education.

NEONATAL-HYPOGLYCEMIA

November 20, 1974
Navapache Hospital, Lakeside, AZ

SPONSOR: University of Arizona

CONTACT:
William Daily, M.D.
Good Samaritan Hospital
Phoenix, AZ 85006

Approved for 2 required hours toward the ArMA Certificate in Continuing Medical Education.

MYASTHENIA GRAVIS SYMPOSIUM

November 30, 1974
Del Webb's TowneHouse, Phoenix, AZ

SPONSOR: Arizona Chapter of the Myasthenia
Gravis Foundation, Inc.

CONTACT:
Bob Perry
P. O. Box 217
Tolleson, AZ 85353

Approved for 2 required hours toward the ArMA Certificate in Continuing Medical Education.

PEDIATRIC EMERGENCY CARE

November 30 & December 1, 1974
Arizona Medical Center, Tucson, AZ

SPONSOR: Arizona Chapter, American
Academy of Pediatrics

CONTACT:
James W. LaBelle, Jr.
2222 North Craycroft Rd.
Tucson, AZ

Approved for 9 required hours toward the ArMA Certificate in Continuing Medical Education.

ARIZONA CHAPTER, AMERICAN ACADEMY OF PEDIATRICS

November 30-December 1, 1974
Tucson, AZ

SPONSOR: Arizona Chapter, American
Academy of Pediatrics

CONTACT:
James W. LaBelle, M.D.
2222 N. Craycroft Rd.
Tucson, AZ 85712

PHYSICIAN EDUCATION PROGRAM IN FAMILY PLANNING

Univ. of California, Los Angeles, CA
December 2-6, 1974

SPONSOR: DHEW And UCLA Center For
Health Sciences

CONTACT:

Irvin M. Cushner, M.D.
Ob/Gyn Department
UCLA Center for Health Sciences
Los Angeles, CA 90024
Tel: (213) 825-1046

BASIC CONCEPTS IN CORONARY CARE FOR THE FAMILY PRACTITIONER

December 5, 6, 7, 1974
Arizona Medical Center, Tucson, AZ

SPONSOR: University of Arizona College of
Medicine

CONTACT:

Dr. Frank Marcus
Arizona Medical Center
Tucson, AZ 85724

Approved for 20 required hours toward the ArMA Certificate
in Continuing Medical Education.

THE ANNUAL SURGICAL CONFERENCE

December 6 and 7, 1974
Scottsdale Hilton Hotel, Scottsdale, AZ

SPONSOR: Arizona Chapter of the American
College of Surgeons

CONTACT:

Stephen Flynn, M.D.
3308 N. 3rd Ave., Suite 4
Phoenix, AZ 85013

Approved for 11 required hours toward the ArMA Certificate in
Continuing Medical Education.

ENT

December 10, 1974
Page Hospital, Page, AZ

SPONSOR: Arizona Medical Center, U of A CESA

CONTACT:

George Gorman, M.D.
1355 N. Beaver St.
Flagstaff, AZ 86001

Approved for 2 required hours toward the ArMA Certificate in
Continuing Medical Education.

NEW PSYCHOPHARMACOLOGY

January 10, 1975
Arizona State Hospital, Phoenix AZ
Personnel & Education Bldg.

SPONSOR: Arizona State Hospital

CONTACT:

Eli Schlossberg, R.Ph.
2500 E. Van Buren St.
Phoenix, AZ

Approved for 3 required hours toward the ArMA Certificate in
Continuing Medical Education.

THIRD ANNUAL SURGICAL SYMPOSIUM

January 19, 24, 1975
Sheraton Scottsdale, Scottsdale, AZ

SPONSOR: Phoenix Surgical Society, Tucson
Surgical Society and U of A
College of Medicine

SPONSOR:

Phillip Saba, M.D.
4550 North 51st Ave.
Phoenix, AZ 85031

Approved for 28 required hours toward the ArMA Certificate
in Continuing Medical Education.

EIGHTEENTH ANNUAL CARDIAC SYMPOSIUM

January 24, 25, 1975
Scottsdale Hilton Inn, Scottsdale, AZ

SPONSOR: American Heart Association,
Arizona Affiliate

CONTACT:

Brendan Phibbs, M.D.
1720 East McDowell Road
Phoenix, AZ 85006

Approved for 12 required hours toward the ArMA Certificate
in Continuing Medical Education.

SECOND ANNUAL SYMPOSIUM BARROW NEUROLOGICAL INSTITUTE

January 23-25, 1974
Camelback Inn, Scottsdale, AZ

SPONSOR: The Barrow Neurological Institute
of St. Joseph's Hospital & Medical Center

CONTACT:

Richard A. Thompson, M.D.
Division of Neurology
Barrow Neurological Institute
St. Joseph's Hospital Medical Center
350 W. Thomas Road
Phoenix, AZ 85013

Approved for 15 required hours toward the ArMA Certificate
in Continuing Medical Education.

FRONTIERS IN OPHTHALMOLOGY

February 6, 7, 8, 1975
Scottsdale Hilton, Scottsdale, AZ

SPONSOR: Rockefeller & Abbie Prentice
Eye Institute of St. Luke's
Hospital Medical Center

CONTACT:
Louis Rosenbaum, M.D.
500 E. Thomas Road
Phoenix, AZ 85012

Approved for 18 required hours toward the ArMA Certificate
in Continuing Medical Education.

ARIZONA MEDICAL ASSOCIATION 84TH ANNUAL MEETING

April 22-26, 1975
Braniff Place Hotel and Tucson Community Center
Tucson, AZ

SPONSOR: Arizona Medical Association and
Northwestern University

CONTACT:
Donald J. Ziehm, M.D.
Program Director
Arizona Medical Association
810 W. Bethany Home Rd.
Phoenix, AZ 85013

SYMPOSIUM ON INFECTION CONTROL

March 20 & 21, 1975
Ramada Inn, Phoenix, AZ

SPONSOR: Assoc. for Infection Control,
Arizona Dept. of Health Services,
and Center for Disease Control
at Atlanta, Ga.

CONTACT:
Sonia J. Burns, R.N.
3923 S. Willow Drive
Tempe, AZ 85282

Approved for 12 required hours toward the ArMA Certificate
in Continuing Medical Education.

PHYSICIANS TRAINING PROGRAM AS PART OF ARTHRITIS SERVICES PROGRAM

July 1, 1974 - June 30, 1975
Arizona Medical Center, Tucson, AZ

SPONSOR: Arizona Medical Center and
Arthritis Services Program

CONTACT:
Beth Ziebell
3813 E. 2nd St.
Tucson, AZ

Approved for 40 required hours toward the ArMA Certificate
in Continuing Medical Education.

ARTHRITIS SERVICES PROGRAM

April 5, 1975, 9 a.m.-4 p.m.
Arizona Medical Center, Tucson, AZ

SPONSOR: Arthritis Services Program,
U of A College of Medicine

CONTACT:
Beth Ziebell
3813 E. 2nd St.
Tucson, AZ

Approved for 6 required hours toward the ArMA Certificate
in Continuing Medical Education.

VECTORCARDIOGRAPHY — A BASIC WORKSHOP

April 30-May 2, 1975
Good Samaritan Hospital, Phoenix, AZ

SPONSOR: American College of Cardiology,
Institute for Cardiovascular
Diseases, Good Samaritan Hospital

CONTACT:
Alberto Benchimol, M.D.
Institute for Cardiovascular Diseases
1033 E. McDowell Rd.
Phoenix, AZ

**PHOENIX PSYCHIATRIC COUNCIL
CONTINUING EDUCATION PROGRAM**

September 1974 — May 1975
Arizona Medical Association Offices
810 W. Bethany Home Rd.
Phoenix, AZ 85013

SPONSOR: Phoenix Psychiatric Council

CONTACT:

Robert H. Barnes, M.D.
525 N. 18th St.
Phoenix, AZ 85006

Approved for 2 required hours per session toward the ArMA
Certificate in Continuing Medical Education.

PATIENT STAFFING CONFERENCE

Three times weekly
Camelback Hospital, Phoenix, AZ

SPONSOR: Camelback Hospital

CONTACT:

Stuart M. Gould, Jr., M.D.
Medical Director
Camelback Hospital
5055 N. 34th St.
Phoenix, AZ 85018

Approved for 1 elective hour per conference toward the ArMA
Certificate in Continuing Medical Education.

BI-MONTHLY MEDICAL EDUCATION SEMINAR

Every other Wed. AM
Begin 7/3/74

Maryvale Samaritan Hospital, Phoenix, AZ

SPONSOR: Medical Staff Maryvale Hospital

CONTACT:

Thomas J. Groves, M.D.
6037 W. Elm St.
Phoenix, AZ 85033

Approved for 1 required hour per session toward the ArMA
Certificate in Continuing Medical Education.

MORBIDITY & MORTALITY CONFERENCE

2nd Monday, Monthly, 12:45 p.m.
Scottsdale Memorial Hospital, Scottsdale, AZ

SPONSOR: Medical Staff

CONTACT:

R. C. Good, M.D.
Dir. Medical Education
7300 E. 4th St.
Scottsdale, AZ

Approved for 1 elective hour per conference toward the
ArMA Certificate in Continuing Medical Education.

CAMELBACK HOSPITAL CLINICAL CONFERENCE

3rd Tuesday monthly
Camelback Hospital, Phoenix, AZ

SPONSOR: Camelback Hospital

CONTACT:

Stuart M. Gould, Jr., M.D.
Medical Director
Camelback Hospital
5055 N. 34th St.
Phoenix, AZ 85018

Approved for 1 elective hour per session toward the ArMA
Certificate in Continuing Medical Education.

CLINICAL PATHOLOGICAL CONFERENCE

4th Monday, Monthly, 12:45 p.m.
Scottsdale Memorial Hospital, Scottsdale, AZ

SPONSOR: Medical Staff

CONTACT:

R. C. Good, M.D.
Director of Medical Education
7300 E. 4th St.
Scottsdale, AZ

Approved for 1 elective hour per conference toward the
ArMA Certificate in Continuing Medical Education.

MEDICAL GRAND ROUNDS

3rd Monday, Monthly, 12:45 p.m.
Scottsdale Memorial Hospital, Scottsdale, AZ

SPONSOR: Medical Staff

CONTACT:

R. C. Good, M.D.
Dir. of Medical Education
7300 E. 4th St.
Scottsdale, AZ

Approved for 1 elective hour per conference toward the
ArMA Certificate in Continuing Medical Education.

SURGICAL GRAND ROUNDS 4TH TUESDAY OF EACH MONTH

Hospital Auditorium
Baptist Hospital, Phoenix

SPONSOR: Baptist Hospital Phoenix

CONTACT:

James B. Shields, M.D.
6036 N. 19th Ave.
Phoenix, AZ 85015

Approved for 1½ required hours per month toward the
ArMA Certificate in Continuing Medical Education.

FAMILY PRACTICE CONFERENCE

1st Monday, Monthly, 12:45 p.m.
Scottsdale Memorial Hospital, Scottsdale, AZ

SPONSOR: Medical Staff

CONTACT:

R. C. Good, M.D.
Dir. of Medical Education
7300 E. 4th St.
Scottsdale, AZ

Approved for 1 elective hour per conference toward the
ArMA Certificate in Continuing Medical Education.

CARDIOLOGY CONFERENCE

Weekly — Friday 8-9 a.m.
St. Mary's Hospital Auditorium
Tucson, AZ

SPONSOR: St. Mary's Hospital

CONTACT:

A. L. Forte, M.D.
St. Mary's Hospital
Tucson, AZ 85724

Approved for one required hour toward the ArMA Certificate
in Continuing Medical Education.

CLINICAL CANCER CONFERENCE

3rd Wednesday Every Month
Butler Bldg. Conference Room
Good Samaritan Hospital, Phoenix, AZ

SPONSOR: Good Samaritan Hospital

CONTACT:

John A. Bruner, M.D.
926 E. McDowell Road
Phoenix, AZ 85006

Approved for 1 required hour per session toward the ArMA
Certificate in Continuing Medical Education.

PROBLEM CASE WORKSHOPS

3rd Monday of each month 7:30 a.m.
Room 4410, Arizona Medical Center, Tucson, AZ

SPONSOR: Division of Ophthalmology, U of A
College of Medicine

CONTACT:

H. E. Cross, M.D., Ph.D.
Arizona Medical Center
Dept. of Surgery
Tucson, AZ

Approved for 2 required hours toward the ArMA Certificate
in Continuing Medical Education.



Directory

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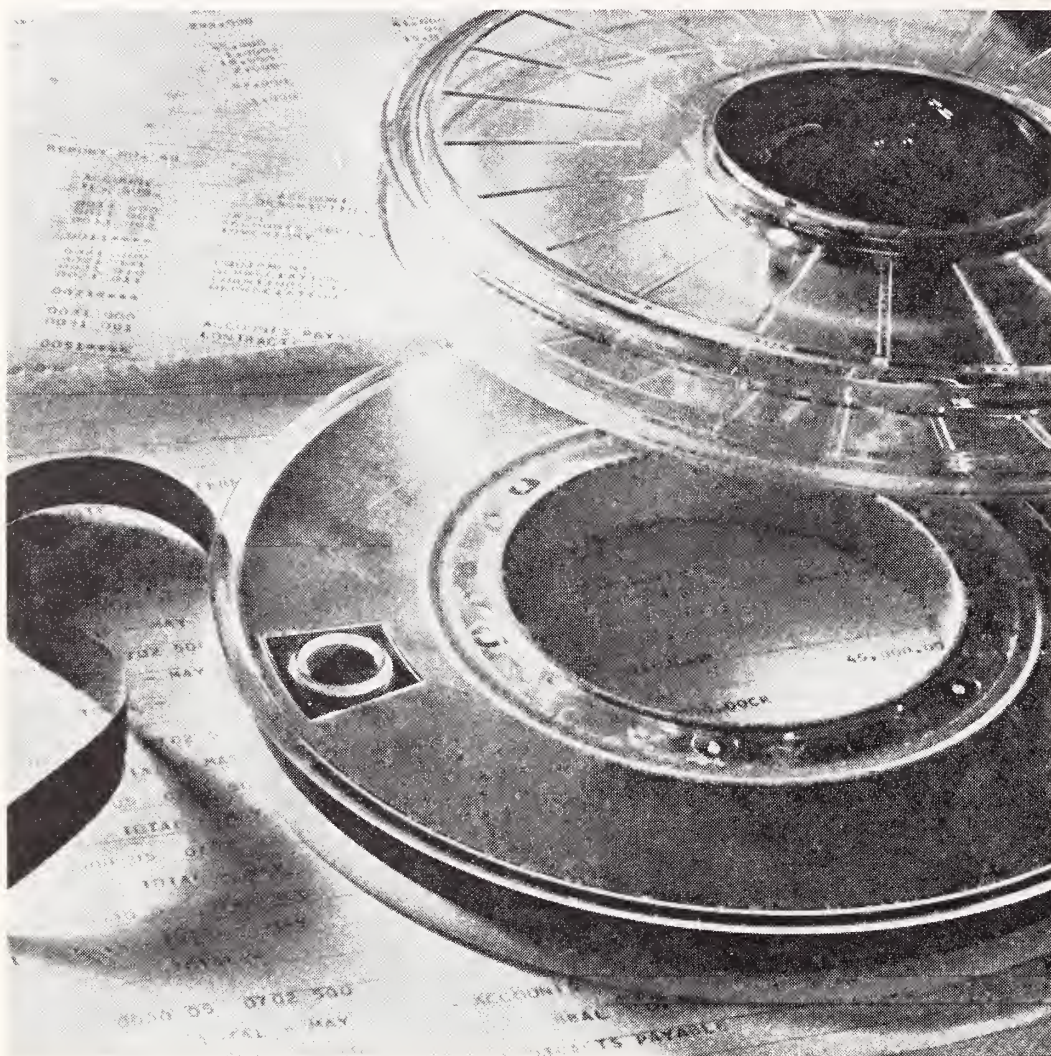
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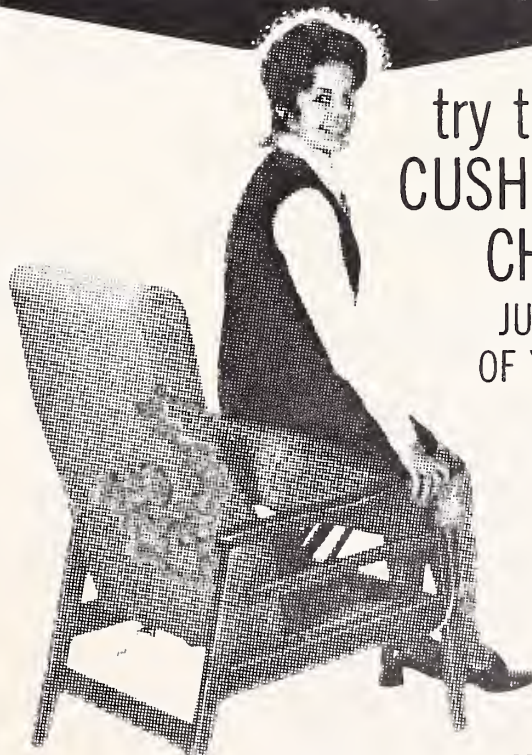
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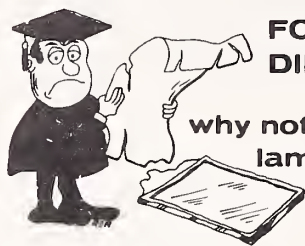
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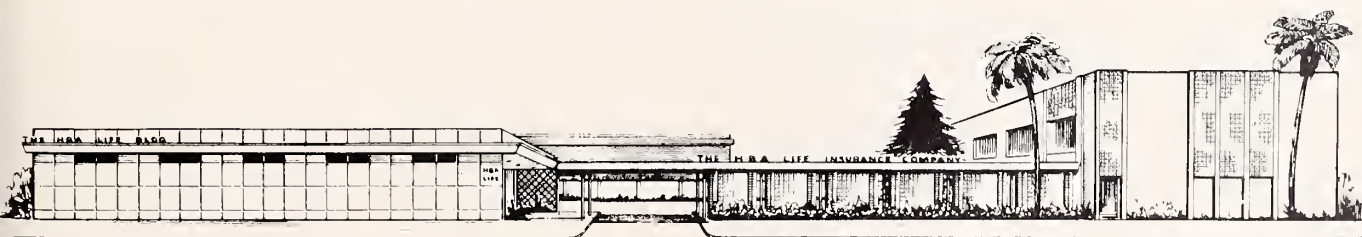
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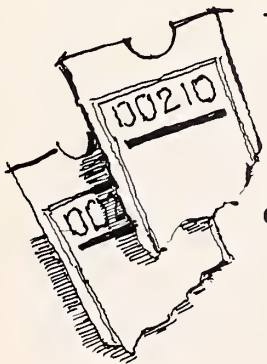
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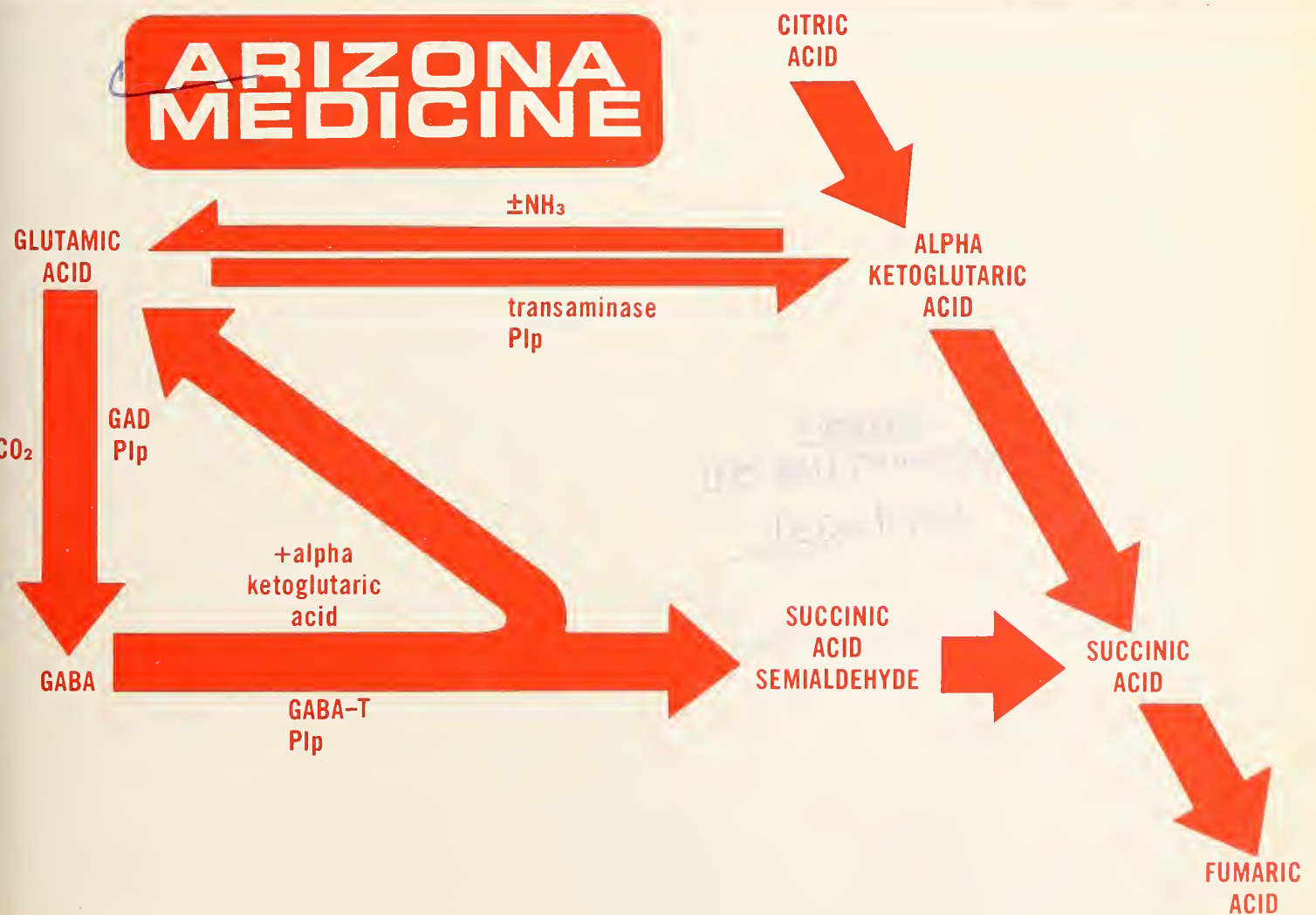
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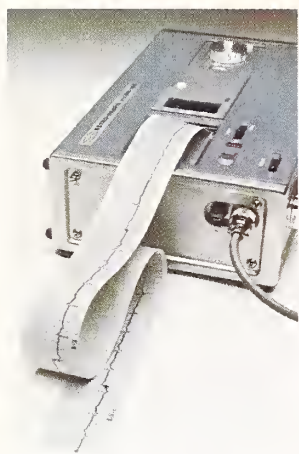
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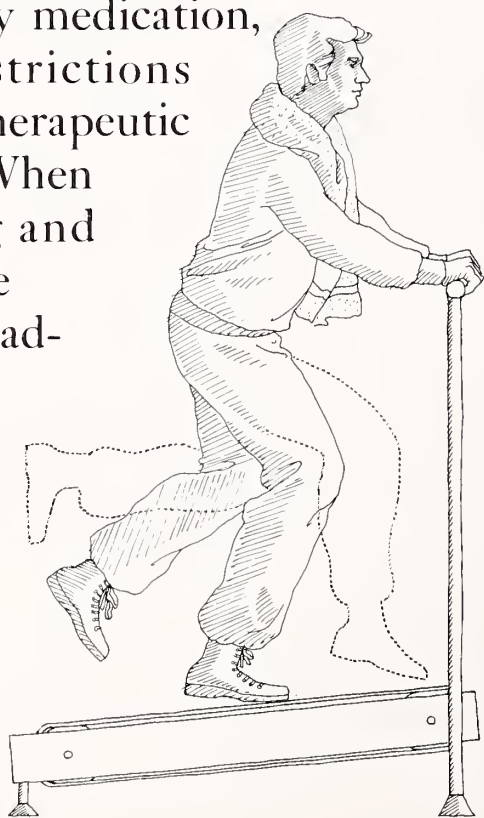


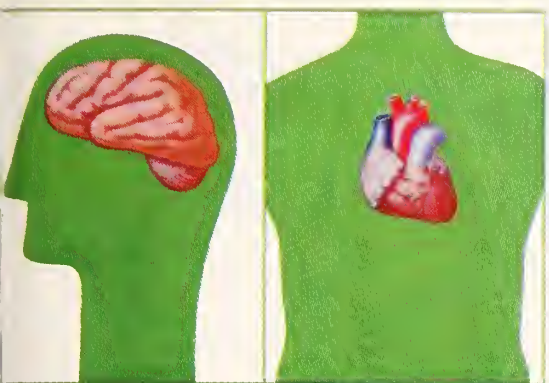
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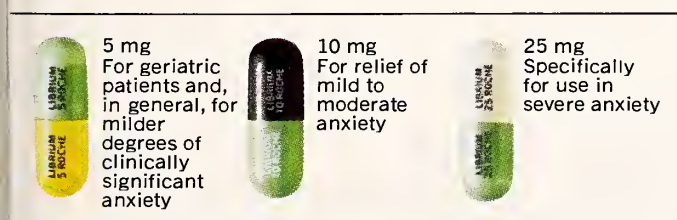
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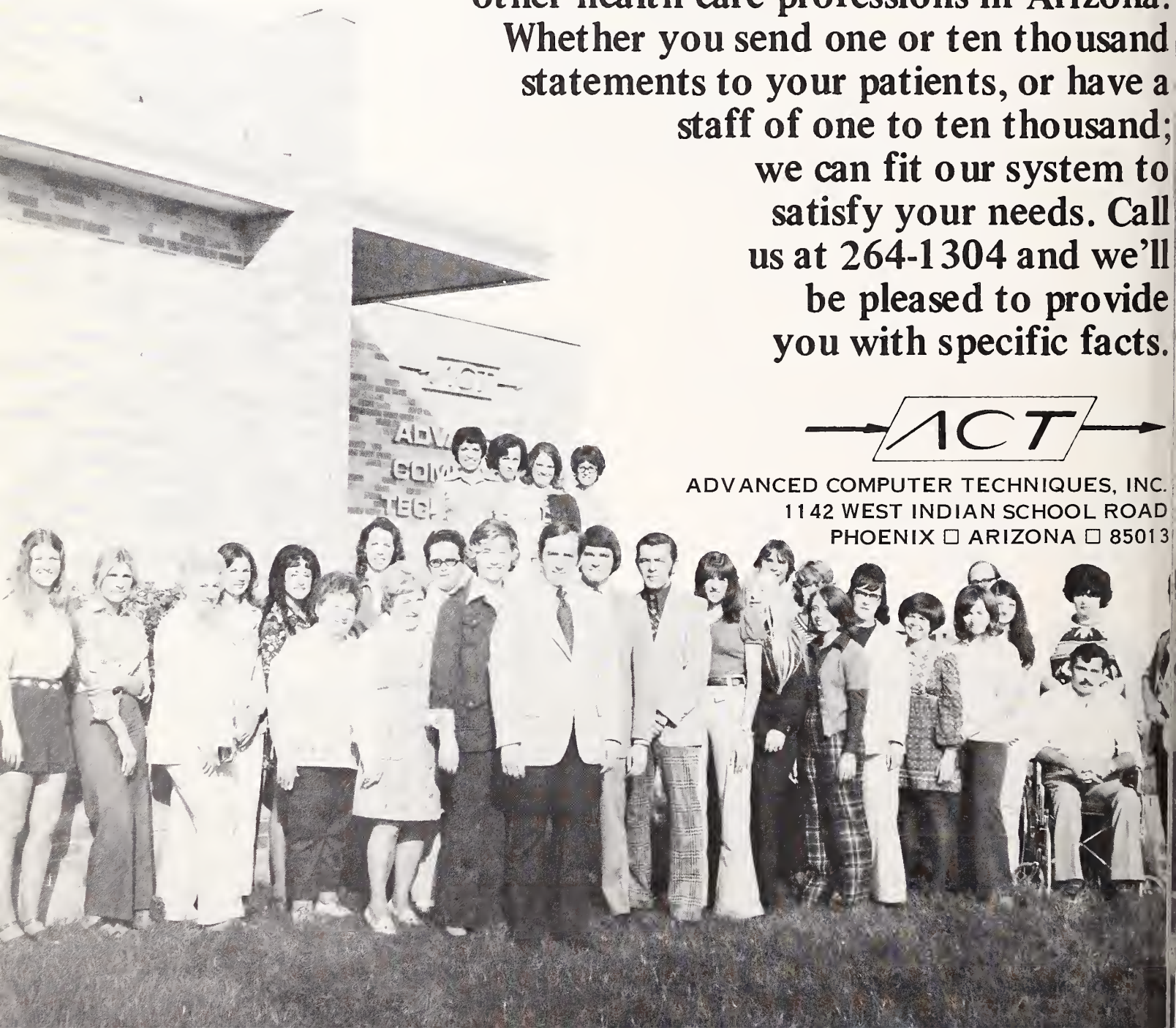
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The Role of the Detail Man

"I may be prejudiced, but I am very much in favor of the detail man I meet. Most of them are knowledgeable about the drugs they promote and can be a great help in acquainting me with new medication."

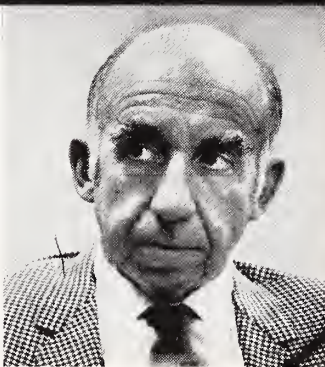
Family Physician's Perception

I think that most general practitioners in this area feel as I do about the detail man. Over the years I have gotten to know most of the men who visit me regularly and they in turn have become aware of my particular interests and the nature of my practice. They, therefore, limit their discussion as much as possible to the areas of interest to me. Since I usually see the same representative again in future visits, it is in his best interest to supply me with the most honest, factual, as well as up-to-date information about his products.

Dr. Willard Gobbell
Family Physician
Encino, California



Dr. Jeremiah Stamler
Chairman
Department of Community
Health and Preventive
Medicine, and Dingman
Professor of Cardiology
Northwestern University
Medical School



"In the total picture of dealing with health problems in this country there is a potential for detail men to play a meaningful role."

The Positive Influence

My contact with representatives and salesmen of the pharmaceutical industry is the type of contact that people in a medical center, research people, and academic people have and that's in all likelihood on a somewhat different level from that of the practicing physician.

Let me touch on how I personally perceive the role of the sales representative. These men reach large numbers of health professionals. Thus they could be — and at times actually are — disseminators of useful information. They could consistently serve a real educational function in their ability to discuss their products.

At present they do distribute printed material, brochures and pamphlets — some of it scientifically sound and therefore truly useful — as well as some excellent film produced by the pharmaceutical industry. When they function in the

Opinion
&
Dialogue

Is He a Source of Information?

Yes, with certain reservations. The average sales representative has a great fund of information about the drug products he is responsible for. He is usually able to answer most questions fully and intelligently. He can also supply reprints of articles that contain a great deal of information. Here, too, I exercise some caution. I usually accept most of the statements and opinions that I find in the papers and studies which come from the larger teaching facilities. It goes without saying that a physician should also rely on other sources for his information on pharmacology.

Training of Sales Representatives

Ideally, a candidate for the position as a sales representative of a pharmaceutical company should be a graduate pharmacist who has a questioning mind. I don't think this is possible in every case, and so it becomes the responsibility

of the pharmaceutical company to train these individuals comprehensively. It is of very great importance that the detail man's knowledge of the product he represents be constantly reviewed as well as updated. This phase of the sales representative's education should be a major responsibility of the medical department of the pharmaceutical company.

I am certain that most of these companies take special care to give their detail men a great deal of information about the products they produce — information about indications, contraindications, side effects and precautions. Yet, although most of the detail men are well informed, some, unfortunately, are not. It might be helpful if sales representatives were reassessed every few years to determine whether or not they are able to fulfill their important function. Incidentally, I feel the same way about periodic assessments of everyone

in the health care field, whether they be general practitioners, surgeons or salesmen.

Value of Sampling

I personally am in favor of limited sampling. I do not use sampling in order to perform clinical testing of a drug. I feel that drug testing should rightly be left to the pharmacology researcher and to the large teaching institutions where such testing can be done in a controlled environment.

I do not use samples as a "starter dose" for my patients. I do, however, find samples of drugs to be of value in that they permit me to see what the particular medication looks like. I get to see the various forms of the particular medication at first hand, and if it is in a liquid form I take the time to taste it. In that way I am able to give my patients more complete information about the particular medications that I prescribe for them.

capacity they are indeed useful; particularly in the fact that they disseminate broadly based educational material and serve not just as "pushers" of their drugs.

The Other Side of the Coin

Obviously, the pharmaceutical companies are not producing all this material as a labor of love — they are in the business of selling products for profit. In this regard the ambitious and improperly motivated sales representative can exert a negative influence on the practicing physician, both by presenting a one-sided picture of his product, and by encouraging the practitioner to depend too heavily on drugs for his total therapy. In these ways, the salesman has often distorted objective reality and undermined his potential role as an educator.

The Industry Responsibility

Since the detail man must be an information resource as well as a representative of his particular pharmaceutical company, he should be carefully selected and

thoroughly trained. That training, perforce, must be an ongoing one. There must be a continuing battle within and with the pharmaceutical industry for high quality not only in the selection and training of its sales representatives, but also in the development of all of its promotional and educational material.

The industry must be ready to accept constructive as well as corrective criticism from experts in the field and consumer spokesmen, and be willing to accept independent peer review. The better educated and prepared the salesman is, the more medically accurate his materials, the better off the pharmaceutical industry, health professionals and the public — *i.e.*, the patients — will be.

Physician Responsibility

The practicing physician is in constant need of up-dated information on therapeutics, including drugs. He should and does make use of drug information and answers to specific questions supplied by the pharmaceutical representative. However, that informa-

tion must not be his main source of continuing education. The practitioner must keep up with what is current by making use of scientific journals, refresher courses, and information received at scientific meetings.

The practicing physician not only has the right, but has the responsibility to demand that the pharmaceutical company and its representatives supply a high level of valid and useful information. I feel certain that if such a high level is demanded by the physician as well as the public, this demand will be met by an alert and concerned pharmaceutical industry.

From my experience, my impression is that sectors of the pharmaceutical industry are indeed ethical. I challenge the industry as a whole to live up to that word in its finest sense.

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Randomycin® (methacycline HCl)

CONTRAINDICATIONS: Hypersensitivity to any of the tetracyclines.

WARNINGS: Tetracycline usage during tooth development (last half of pregnancy to eight years) may cause permanent tooth discoloration (yellow-gray-brown), which is more common during long-term use but has occurred after repeated short-term courses. Enamel hypoplasia has also been reported. **Tetracyclines should not be used in this age group unless other drugs are not likely to be effective or are contraindicated.**

Usage in pregnancy. (See above **WARNINGS** about use during tooth development.) Animal studies indicate that tetracyclines cross the placenta and can be toxic to the developing fetus (often related to retardation of skeletal development). Embryotoxicity has also been noted in animals treated early in pregnancy.

Usage in newborns, infants, and children. (See above **WARNINGS** about use during tooth development.)

All tetracyclines form a stable calcium complex in any bone-forming tissue. A decrease in fibula growth rate observed in prematures given oral tetracycline 25 mg/kg every 6 hours was reversible when drug was discontinued.

Tetracyclines are present in milk of lactating women taking tetracyclines.

To avoid excess systemic accumulation and liver toxicity in patients with impaired renal function, reduce usual total dosage and, if therapy is prolonged, consider serum level determinations of drug. The anti-anabolic action of tetracyclines may increase BUN. While not a problem in normal renal function, in patients with significantly impaired function, higher tetracycline serum levels may lead to azotemia, hyperphosphatemia, and acidosis.

Photosensitivity manifested by exaggerated sunburn reaction has occurred with tetracyclines. Patients apt to be exposed to direct sunlight or ultraviolet light should be so advised, and treatment should be discontinued at first evidence of skin erythema.

PRECAUTIONS: If superinfection occurs due to overgrowth of nonsusceptible organisms, including fungi, discontinue antibiotic and start appropriate therapy.

In venereal disease, when coexistent syphilis is suspected, perform darkfield examination before therapy, and serologically test for syphilis monthly for at least four months.

Tetracyclines have been shown to depress plasma prothrombin activity; patients on anticoagulant therapy may require downward adjustment of their anticoagulant dosage.

In long-term therapy, perform periodic organ system evaluations (including blood, renal, hepatic).

Treat all Group A beta-hemolytic streptococcal infections for at least 10 days.

Since bacteriostatic drugs may interfere with the bactericidal action of penicillin, avoid giving tetracycline with penicillin.

ADVERSE REACTIONS: Gastrointestinal (oral and parenteral forms): anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis, inflammatory lesions (with monilial overgrowth) in the anogenital region.

Skin: maculopapular and erythematous rashes; exfoliative dermatitis (uncommon). Photosensitivity is discussed above (See **WARNINGS**).

Renal toxicity: rise in BUN, apparently dose related (See **WARNINGS**).

Hypersensitivity: urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus.

Bulging fontanels, reported in young infants after full therapeutic dosage, have disappeared rapidly when drug was discontinued.

Blood: hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia.

Over prolonged periods, tetracyclines have been reported to produce brown-black microscopic discoloration of thyroid glands; no abnormalities of thyroid function studies are known to occur.

USUAL DOSAGE: Adults—600 mg daily, divided into two or four equally spaced doses. More severe infections: an initial dose of 300 mg followed by 150 mg every six hours or 300 mg every 12 hours. Gonorrhea: In uncomplicated gonorrhea, when penicillin is contraindicated, 'Randomycin' (methacycline HCl) may be used for treating both males and females in the following clinical dosage schedule: 900 mg initially, followed by 300 mg q.i.d. for a total of 5.4 grams.

For treatment of syphilis, when penicillin is contraindicated, a total of 18 to 24 grams of 'Randomycin' (methacycline HCl) in equally divided doses over a period of 10-15 days should be given. Close follow-up, including laboratory tests, is recommended.

Eaton Agent pneumonia: 900 mg daily for six days.

Children—3 to 6 mg/lb/day divided into two to four equally spaced doses.

Therapy should be continued for at least 24-48 hours after symptoms and fever have subsided.

Concomitant therapy: Antacids containing aluminum, calcium or magnesium impair absorption and are contraindicated. Food and some dairy products also interfere. Give drug one hour before or two hours after meals. Pediatric oral dosage forms should not be given with milk formulas and should be given at least one hour prior to feeding.

In patients with renal impairment (see **WARNINGS**), total dosage should be decreased by reducing recommended individual doses or by extending time intervals between doses.

In streptococcal infections, a therapeutic dose should be given for at least 10 days.

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The RIA method for TSH was pioneered by Utiger and Odell *et al.* in 1965. We are employing Hershman's modification of this method. Hershman and Pittman have reviewed the utility of the RIA of serum TSH in man (Annals Intern. Med. 74:481, 1971) and have emphasized its usefulness both for establishing the diagnosis of primary hypothyroidism and for differentiating it from hypothyroidism secondary to hypopituitarism. TSH levels above normal are strongly suggestive of the existence of primary hypothyroidism and may in fact be the most sensitive index of this disease.

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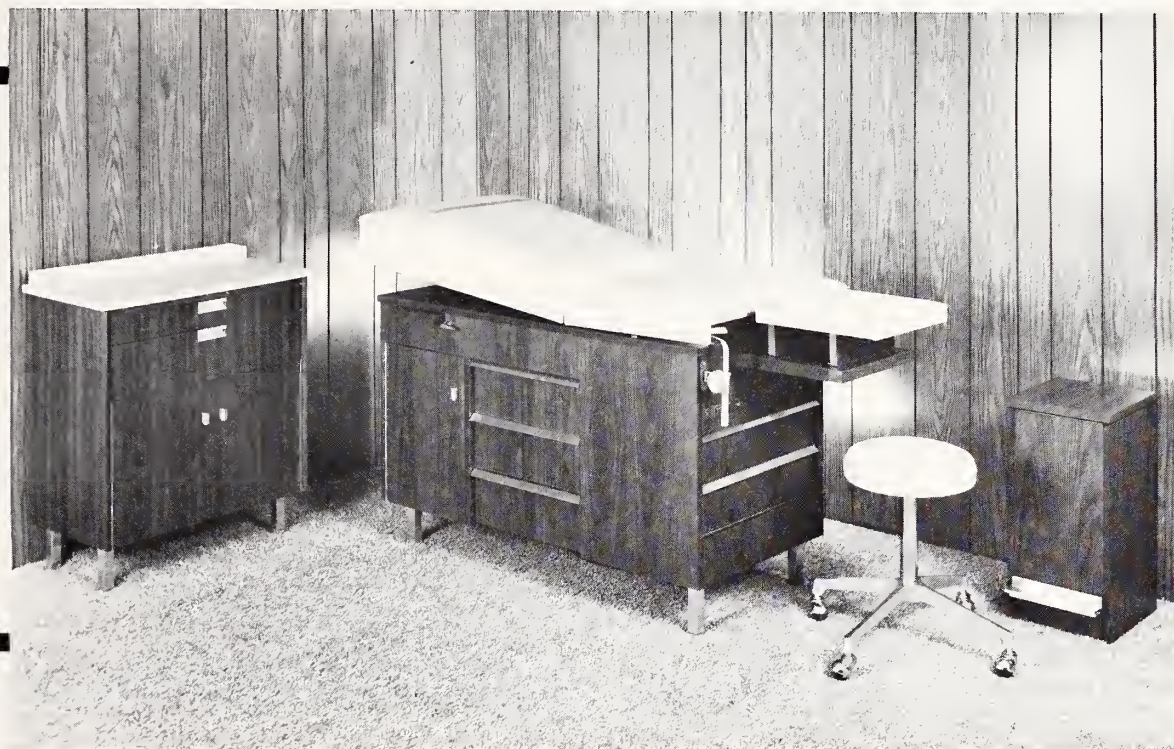
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Original Articles

TREATMENT OF ACUTE ISONIAZID TOXICITY

MAURICE L. SIEVERS, M.D.

RICHARD N. HERRIER, PHARM.D.

Accidental and intentional poisoning due to isoniazid (INH) may be expected to increase in frequency because of the greatly expanded use of this medication for prophylaxis and treatment of tuberculosis. Indeed, INH overdosage has become a major problem among southwestern American Indians, especially for the Apache tribe, in whom tuberculosis is prevalent¹⁻³ and suicide is common.^{3, 4} During a recent 30-month period (January 1971 through June 1973) there were 535 suicide attempts among 55,000 southwestern Indians.⁵ Isoniazid was involved in 7% of all suicide attempts, and in 19% of the suicide deaths.

Women in the 15-29 age group accounted for 64% (23 of 36) of the INH overdosage cases, 60% (3 of 5) of the deaths from INH ingestion.

Maurice L. Sievers, M.D., is Senior Clinician, Internal Medicine and Clinical Research, Phoenix Indian Medical Center, Phoenix, Arizona 85016.
Richard N. Herrier, Pharm.D., is Chief Clinical Practices, Pharmacy Department, Phoenix Indian Medical Center, Phoenix, Arizona 85016.

and 47% of all types of suicide attempts, whereas that age and sex category comprised only 12% of the southwestern Indian population. Another category with disproportionately frequent INH poisoning was the group receiving INH prophylactically but having only a small chance of developing active tuberculosis. Among the relative contraindications to isoniazid prophylaxis, because of an increased risk of intentional INH overdoses, are: (1) a history of drug or alcohol abuse; (2) prior or concurrent depressive state; (3) impulsive behavior; (4) a history of previous suicide attempts; and (5) other evidence of unstable relationships.

Manifestations of Acute INH Toxicity

Recently, Brown⁶ reviewed 62 American, British, and French publications regarding acute INH poisoning; she also recorded personal observations of acute INH toxicity among 42 Alaskan Native Americans, 9 of whom died. Based on these published reports and the experiences of the present authors, the following information summarizes the manifestations of acute INH poisoning.

Acute ingestion, by adults, of 6 to 10 g of INH (20-33 isoniazid tablets, 300 mg each) is uniformly associated with severe toxicity and a significant mortality rate.⁵⁻⁸ As little as 1.5 g of INH may induce minor toxicity, while 15 g or more is often fatal without appropriate therapy.⁵⁻⁸ After ingestion of toxic amounts of INH, a person is usually asymptomatic for 30 minutes to 2 hours. Friends, family, and even medical observers who evaluate INH poisoning victims during this latent period may be lulled into unwarranted optimism, with consequent failure to institute observation or treatment. Following the quiescent interval various symptoms may appear, including nausea, vomiting, slurred speech, dizziness, and atropine-like effects (dilated pupils, increased visual sensitivity to light, tachycardia, and urinary retention). There may be a sudden onset of stupor or coma.

Within 1½ to 3 hours after ingestion (roughly corresponding to the time that peak INH serum levels are attained⁹), hyperreflexia or areflexia may occur, followed by tonic-clonic generalized or localized seizures, which may be intractable to anticonvulsants, especially to diphenylhydantoin and barbiturates.⁷⁻¹⁴ Severe poisoning may produce hypotension, cyanosis, and death. On evaluation, the patient may have physical and laboratory evidence of severe metabolic (or mixed) acidosis; fever, hypotension, and oliguria or anuria. Hyperglycemia, glycosuria, and ketonuria may occur and suggest the possibility of diabetic ketoacidosis and coma.

The amount of INH which will induce seizures varies with species and individuals. Indeed, the LD50 in animals ranges from 50 mg/kg for dogs¹⁵ to 1,400 mg/kg for rats.¹⁶ Published case reports^{6,14} indicate that human ingestion of 80 to 150 mg/kg usually results in severe seizures with a high likelihood of fatality. These data for man approximate results of the animal studies in which dogs receiving 50 to 100 mg/kg¹⁵ and monkeys given 80 to 240 mg/kg¹⁷ had intractable convulsions and very high mortality rates. In humans, seizures occasionally may occur with relatively small doses. Isoniazid 15 mg/kg orally lowers the seizure threshold to photic stimulation,¹⁸ and spontaneous convulsions have been reported in 1% to 3% of tuberculosis patients receiving 14 mg/kg/day or 14 mg/kg twice weekly.¹⁹

Rationale for Therapy

In the central nervous system (CNS), synaptic transmission is inhibited by gamma-aminobutyric acid (GABA). Toxic manifestations of acute massive INH overdose uniformly include severe convulsions, produced by overwhelming release or stimulation of the CNS and apparently caused by disruption of the glutamic acid-gamma-aminobutyric acid system.²⁰⁻²² Isoniazid lowers GABA levels in the brain by inhibiting GAD, L-glutamic acid decarboxylase, an en-

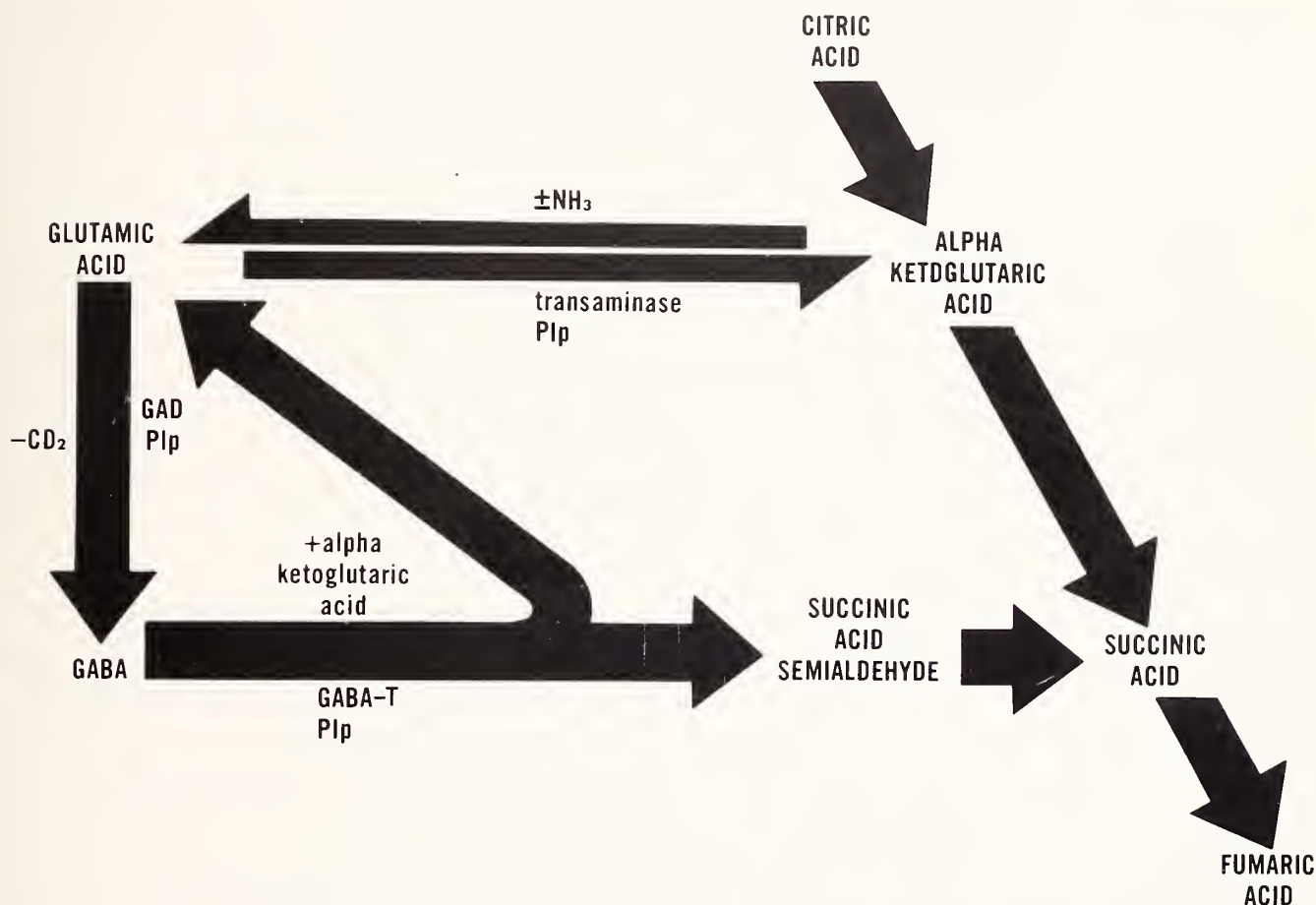


Figure 1

Metabolism of glutamic acid and GABA (gamma-aminobutyric acid) in brain (modified from Holz and Palm²⁰). Pyridoxine, in the form of pyridoxal-5'-phosphate (Plp), is a coenzyme with a critical role in GABA production,

as shown in the diagram. Isoniazid interferes with the activity of GAD (L-glutamic acid decarboxylase). GABA-T = GABA-alpha-ketoglutaric acid transaminase.

zyme responsible for the synthesis of GABA²⁰ (Figure 1). The onset of seizures relates closely to the maximal decrease of GABA in the CNS.²¹ Wood and Peesker²² suggest that local CNS changes in GABA content and in GAD activity may be the incitatory mechanism in INH-induced seizures. The decarboxylase enzyme GAD requires pyridoxal-5'-phosphate, the active form of vitamin B₆, as a coenzyme.²⁰ Administration of large doses of INH produces a marked increase in the urinary excretion of vitamin B₆ and its metabolites.²³ In rats, vitamin B₆ depletion has been shown to decrease GAD activity 60% after 8 weeks.²⁴ Alcohol ingestion is frequently associated with INH overdosage.^{5, 25, 26} Some observers^{5, 20, 26} have suggested that alcohol increases the toxicity and lethality of INH. Experimental evidence in humans has shown that acetaldehyde, an ethanol metabolite, increases the degradation of phosphorylated vitamin B₆ compounds.²⁷ In common with seizures due to

pyridoxine deficiency on a dietary or hereditary basis, the convulsions induced by hydrazides (including INH) are largely refractory to hydantoins or barbiturates.²⁰

Pyridoxine (vitamin B₆) administration has been shown to protect animals and man from the convulsant effects of INH.²⁰⁻²² Furthermore, the injection of pyridoxine has been reported to restore GAD activity to normal in rats chronically depleted of vitamin B₆.²⁴ By aborting a critical decrease of CNS GAD activity and GABA concentration, pyridoxine, given in a dosage equal to the convulsive dose of simultaneously administered INH, prevented seizures in chicks.²¹ Clinically, in the treatment of INH-induced convulsions, diazepam seems to be the most effective available anticonvulsant.⁵⁻⁷ Barbiturates, hydantoins, and diazepam have each been found to raise CNS GABA levels of animals whose GABA had been depleted by INH administration, as well as in animals with normal

amounts of GABA.^{28, 29} An apparent superiority of diazepam in controlling INH-induced convulsions may reflect its greater capacity than other anticonvulsants for increasing CNS GABA levels.^{28, 29}

The role of acidosis in seizures produced by INH seems ambiguous. Terman and Teitelbaum⁷ suggest that a sudden drop in the blood pH may overwhelm the buffer base compensatory mechanism of the CNS and, thus, contribute to the severity of seizures. In fact, a decrease in cellular pH would be expected to elevate GABA levels in the brain, since at an "acid pH" GAD activity (which is required for GABA synthesis) is increased and GABA-T activity (a transaminase which mediates GABA breakdown) is decreased.²⁰ This mechanism may underlie the usefulness of ketogenic diets for control of seizure disorders, as observed prior to availability of effective anticonvulsant medications,³⁰ and may explain the demonstrated protective effect of acidosis against convulsions in animals.²⁰ In metabolic acidosis the pH generally decreases much less in the cerebrospinal fluid (CSF) than in the blood.³¹ Posner and Plum³¹ have reported that rapid correction of serum acidosis paradoxically increases CSF acidosis and results in the onset or worsening of coma but **not** convulsions.

Terman and Teitelbaum⁷ have stated that correcting acidosis may improve the performance of anticonvulsant medications, although their case reports do not seem to support that conclusion. Theoretically, systemic acidosis may increase the lipid solubility of diphenylhydantoin and barbiturates in the blood, thereby increasing the diffusion of these drugs into the CSF. The correction of acidosis may have the opposite effect.

Recommendations for Management

Because of the severe morbidity and high lethality of large amounts of INH, careful management is necessary. (Table 1) The importance of general supportive treatment is accepted, but the role of pyridoxine as specific therapy for INH-induced convulsions has been controversial (possibly because inadequate amounts of pyridoxine have often been administered).^{7, 25, 32}

Persons asymptomatic after INH overdosage should be observed medically for at least 4 hours. If it can be established unequivocally that toxicity has not occurred and that more than 4 hours has elapsed since ingestion of INH

1. Suspect INH overdosage as the cause of seizures in persons having possible access to INH.
2. Suspect INH overdosage in anyone whose convulsions are poorly controlled by anticonvulsants.
3. When in doubt whether INH overdosage may be the cause of convulsions or coma, clinicians should consider an early therapeutic trial of pyridoxine intravenously because of its relative safety and potential benefit.
4. Treatment should not await determination of INH blood levels for diagnostic confirmation.
5. Recommended initial management of INH overdosage
 - a. General measures
 - 1) Gastric lavage.
 - 2) Coma management, if indicated.
 - 3) Draw blood for determination of glucose, electrolytes, bicarbonate, (blood gases and pH, if available), INH serum level.
 - 4) Start IV fluids (D5W or D5NS).
 - b. Specific measures
 - 1) Pyridoxine
 - a) Administer by slow IV bolus injection, at least one gram of pyridoxine HCl for each estimated gram of INH ingested, in divided doses (5 g/50 ml each bolus).
 - b) Initially, give 5 g pyridoxine by IV bolus injection over 3-5 minutes, even if quantity of INH ingested is unknown; may repeat dose at 5-20 minute intervals until seizures cease or consciousness is regained.
 - c) GIVE PYRIDOXINE WITH INH OVERDOSAGE EVEN IF SEIZURES HAVE NOT OCCURRED.
 - 2) Diazepam: To control seizures inject 5-10 mg. *directly into vein* at rate not to exceed 5 mg/min.
 - 3) Sodium bicarbonate: For correction of acidosis, give 88-132 mEq by IV bolus injection or volutrol; avoid admixing NaHCO₃ and pyridoxine solutions to prevent possible acid-base interaction.

TABLE 1
Suspected INH Overdosage: Circumstances and management.

in amounts less than 20 mg/kg (1.5 g in an adult), only careful observation may be indicated. Usually, however, it should be assumed that absence of symptomatology reflects a latent

period rather than lack of a toxic dose of INH. During the asymptomatic interval, management should generally follow the measures for toxicity as described below, except for the procedures specifically related to coma and convulsions.

In unresponsive patients an airway should be established promptly, and a strict regimen instituted for management of coma (including dependent positioning of head or gastric suctioning, to prevent aspiration, and support of respiration, if required). Prompt gastric lavage with saline solution is desirable. Blood and urine should be obtained for determination of INH levels (and of other toxic materials, if substances other than INH may have been ingested). Blood concentrations of INH are usually significantly higher in acute toxicity than levels occurring from therapeutic doses.^{6, 8, 12, 33} Peak serum levels of INH after a normal daily adult dose (300 mg; or 3 to 5 mg/kg/day) or pediatric dose (8 to 10 mg/kg/day) range from 1 to 7 meg/ml.³⁴⁻³⁷ Patients on intermittent INH therapy (14 mg/kg biweekly) may attain levels in the range of 16 to 32 meg/ml.³⁸

For rapid **qualitative** detection of INH and its metabolites the urine may be tested with commercially available^{*} reagent-impregnated paper strips.³⁹ Treatment should not await the results of **quantitative** tests. The blood specimen should also be utilized for determination of glucose, sodium, potassium, bicarbonate, chloride, and, if available, pH and blood gases.

For specific therapy we recommend the following treatment protocol. First, start intravenous (IV) fluids. If the patient is convulsing, administer diazepam directly into a vein. To minimize the risk of phlebitis, large veins should be used for the injection of diazepam,⁴⁰ and subsequently the veins may be flushed with IV fluids.⁴¹ The suggested initial dose of 5 to 10 mg is given at a rate not to exceed 5 mg/min. If convulsions persist the same dose may be repeated in 10 to 20 minutes; 25 to 30 mg approach the maximum short-term dose. Sudden hypotension or CNS depression may occur, as with barbiturates. Diazepam should not be given into the IV tubing nor mixed or diluted in other solutions or drugs because diazepam has low solubility in water and may precipitate rapidly.

When metabolic acidosis is present sodium bicarbonate therapy is recommended, admin-

istered initially by slow IV injection (88 to 132 mEq NaHCO₃), and, subsequently, by slow IV infusion or by repeated IV injection if acidosis is severe. Further doses should be based on clinical and laboratory evaluation.

Experience with **adequate** doses of pyridoxine in human INH toxicity has been very encouraging.^{5, 6, 32} Therefore, we suggest that pyridoxine be administered by IV injection in sufficient amounts as early as feasible, even if seizures have not occurred. Apparently, the optimal **total** dose of pyridoxine should at least be equal to the estimated maximum amount of INH ingested (i.e., administer one gram of pyridoxine for each estimated gram of INH ingested). Except in enormous doses (>3 to 4 g/kg) pyridoxine is considered nontoxic in animals.⁹ One patient who received pyridoxine 52 g IV (almost 1 g/kg) for INH overdose had no ill effects.⁴²

Initially, 5 g pyridoxine (i.e., 50 ml of 10% solution) should be given IV over 3 to 5 minutes, even if the quantity of INH ingested is unknown. The same dose may be repeated at 5 to 20 minute intervals until the dose of INH ingested is greatly exceeded, seizures cease, or consciousness is regained. If the estimated amount of INH ingested exceeds 200 mg/kg (or, in an adult, a total of 15 g), it may also be desirable to institute an IV infusion with 5 g of pyridoxine HCl in 500 ml of fluid (administered over 2 hours) and to repeat this same IV infusion if further bolus injections of pyridoxine (5 g/50 ml) are needed to control manifestations of INH toxicity. To prevent possible acid-base interaction that may neutralize sodium bicarbonate, admixing with pyridoxine HCl solution should be avoided. A suggested flow chart for following the response of INH poisoning to treatment is shown in Figure 2.

Supplemental therapy to be considered includes forced diuresis with IV fluids, mannitol, or furosemide. If hypotension exists, restoration of intravascular volume is preferable to vasopressors, initially. When hyperglycemia occurs diabetic acidosis must be considered. This condition, alone, rarely produces intractable convulsions, but, if there is a dilemma, limited amounts of insulin may be administered while the etiology is being resolved. Urinary retention may require catheterization, especially to monitor kidney output. Hemodialysis and peritoneal dialysis are seldom utilized, although there is

^{*}Difco Laboratories, Inc., Detroit, Michigan.

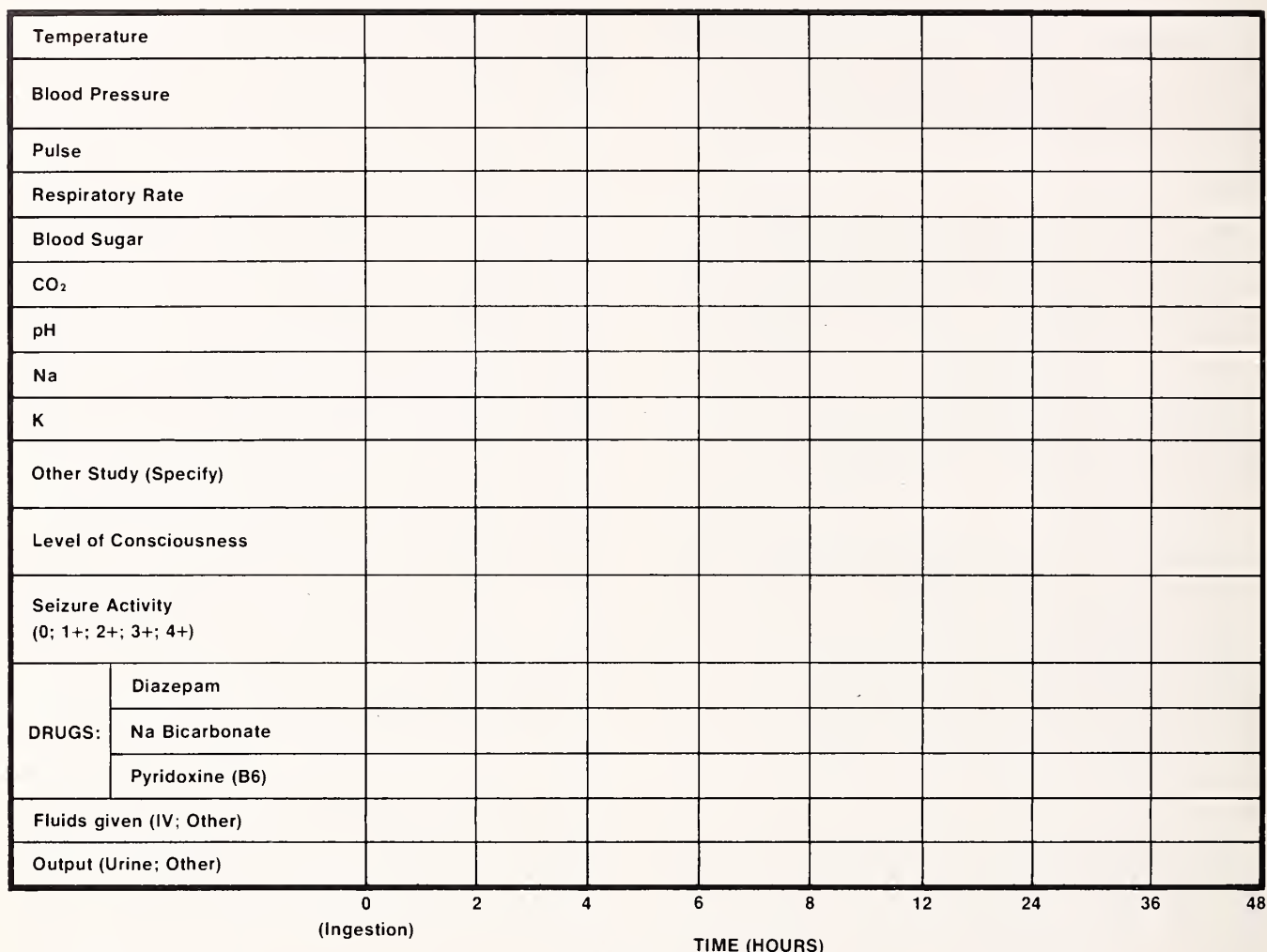


Figure 2
Flow chart for following response to treatment of patients with isoniazid poisoning.

evidence for their usefulness.^{7, 13, 33, 43} Katz and Jobin⁴⁴ recommend that when peritoneal dialysis is used pyridoxine be added to the dialysis fluid, as well as being given IV in large doses.

Summary

Acute poisoning due to isoniazid (INH) over-dosage produces severe morbidity and high mortality when untreated. Recommendations for rational therapy may now be based upon increasing experience in animals and man. In addition to supportive measures, specific treatment is indicated for acidosis, coma, and convulsions. Clinical and research observations suggest that diazepam may be the most effective anticonvulsant for INH-induced seizures. It is recommended that intravenous pyridoxine be administered in amounts equal to the estimated quantity of INH ingested, even if seizures have not occurred. Experience with adequate doses of pyridoxine in human INH toxicity has been very encouraging, and theoretical rationale for the efficacy of pyridoxine is compelling. Over-

dosage with INH should be suspected as the cause of seizures in anyone having access to INH, especially if the convulsions are poorly controlled by anticonvulsant medications. In doubtful circumstances, an early therapeutic trial of pyridoxine intravenously is recommended because of its relative nontoxicity and potential benefit.

STATISTICS OF 1794 HUMAN INGESTIONS OF POTENTIAL POISONS REPORTED IN ARIZONA DURING JANUARY-JULY 1974

AGE:	Number	Percent
Involved under 5 year age group	711	39.6
Involved 6 to 15 year age group	113	6.3
Involved 16 to 30 year age group	477	26.6
Involved 31 to 45 year age group	186	10.4
Involved over 45 year age group	119	6.6
Age not reported	188	10.5
NATURE OF INCIDENT:		
Accidental	918	51.2
Self-poisoning	618	34.4
Unknown	258	14.4
OUTCOME:		
Recovery	1693	94.4
Fatal	101	5.6

CAUSATIVE AGENTS

Internal Medicine	Number°	Percent
Aspirin	128	6.1
Other Analgesic	220	10.5

Barbiturates	146	7.0
Antihistamines	54	2.6
Laxatives	10	.5
Cough Medicine	18	.8
Tranquilizers	341	16.2
Others	326	15.5
Subtotal	1243	59.2
External Medicine		
Liniment	36	1.7
Antiseptic	18	.9
Others	24	1.1
Subtotal	78	3.7
Household Preparation		
Soaps, Detergents, etc.	40	2.0
Disinfectants	33	1.5
Bleach	20	.9
Lye, Corrosives, Drain Cleaners	12	.6
Furniture & Floor Polish	10	.5
Subtotal	115	5.5
Petroleum Distillate		
Kerosene	8	.4
Gasoline	62	3.0
Others	23	1.0
Subtotal	93	4.4
Cosmetics	51	2.4
Pesticides		
Insecticide	36	1.7
Rodenticide	10	.5
Herbicide	4	.2
Subtotal	50	2.4
Paints, Varnishes, etc.	37	1.8
Plants	62	3.0
Miscellaneous	274	13.0
Unspecified	97	4.6
TOTAL	2100*	100.0%

*Some victims ingested more than one potential poison.

ARIZONA POISONING CONTROL INFORMATION CENTER PROFESSIONAL STAFF

Director	Consultants
Albert L. Picchioni, Ph.D., Professor of Pharmacology	Willis R. Brewer, Ph.D., Professor of Pharma- cognosy & Dean, College of Pharmacy
Assistant Director	Paul F. Consroe, Ph.D., Associate Professor of Pharmacology
Lincoln Chin, Ph.D., Professor of Pharmacology	Hugh E. Laird II, Ph.D., Assistant Professor of Pharmacology

NOTICE

To obtain toxicological information on poisons at any time, contact the Arizona Medical Center, University of Arizona, Tucson, telephone number (602) 882-6300. One of the above professional staff members in the Arizona Poisoning Control Information Center will provide consultation service.

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GOLD TOXICITY IN RHEUMATOID ARTHRITIS



HARRY E. THOMPSON, M.D.

Severe Gold toxicity during chrysotherapy occurs in 0.2 to 5% of patients, according to a survey of nine rheumatologists who had utilized Gold for 20 or more years. This toxicity may be minimized by careful attention to factors that relate to planning and treatment. Serum Gold determinations are not helpful therapeutically or in toxicity detection. Reactions are in general easily recognized and treatment is usually successful.

Gold toxicity occurs in some patients with rheumatoid arthritis receiving chrysotherapy. This toxicity to Gold remains a problem in therapy since it appears in two ways: an allergic type, the most frequently noted early in administration. There are accumulating evidences^{1, 2, 3} that Gold toxicity results from a Gold hapten-protein linkage to produce an antigen which stimulates antibody formation. This sensitivity, rather than heavy metal poisoning, may be responsible for most reactions. The dangers of Gold toxicity may be minimized by familiarity with the minor manifestations, the incidence of reactions, standard procedures of administration, and laboratory examination, early recognition, and treatment.

MINOR MANIFESTATIONS OF GOLD THERAPY

These include vasomotor reaction, the immediate "Nitrotoid Reaction," an anaphylactoid reaction, increased or diminished pain after injection, headache, vertigo, etc. Nitrotoid or anaphylactoid reactions are minimal if the patient is given the injection while lying down and kept down for 10 minutes. The other reactions are transient and require no treatment.

Gold is widely distributed in recipients. In one autopsy report,⁴ the highest concentrations were found in lymph nodes, adrenal glands, renal cortex, and other organs of the RE system; the lowest in joint structures. Clinically, Gold may be observed in the vitreous humor of the eye on slit lamp examination and in the conjunctive.⁵ Both are innocuous findings. Skin color is quite distinctive and characteristic in patients on long-term Gold therapy, and is of no significance.

From: 433-35 N. Tucson Blvd., Tucson, Az. 85717 (Dr. Thompson).

Presented in part at the Az. Med. Assoc. Annual Meeting in Scottsdale, Az. 1974.

INCIDENCE OF GOLD REACTIONS

The reported incidence is extremely variable and frequently includes mild transitory reactions not requiring the discontinuance of Gold. For instance, Dr. Freyberg¹ lists 21 references of 7,693 Gold-treated patients, from 1935 to 1958, in which Gold toxicity varied from 8.4% to 62%. He notes that only 4.5% were severe. Because of this marked variability, it appeared worthwhile to get opinions of several rheumatologists throughout the United States who had utilized Gold therapy for 20 or more years. Table No. 1 shows the percentage of mild or severe reactions

ESTIMATED % OF GOLD REACTIONS		
	Mild	Severe
C. McKenna		
H. Polley, Mayo Clinic	25%	5.0%
R. Freyberg, New York	15%	3.0%
B. Norcross		
L. M. Lockie, Buffalo	10%	2.0%
E. Boland, Los Angeles	10%	1.0%
D. Hill, Tucson	30%	1.0%
T. Bayles, Boston	5%	0.5%
C. Smyth, Denver	10%	0.5%
J. Hollander, Philadelphia	3%	0.2%
H. Thompson, Tucson	3%	0.2%

Table No. 1 showing incidence of Gold reactions reported by rheumatologists with 20 years experience with Gold therapy (Personal Communicationns).

to Gold reported by them. You will note that they reported mild reactions that varied from 3% to 30%, and severe from 0.2% to 5%.

PLANNING PROCEDURES

The potential dangers of Gold therapy may be minimized by careful planning procedures. They are:

- (1) Establishment of a definite diagnosis of rheumatoid arthritis.
- (2) Patient orientation — this outlines to the patient the procedure prior to Gold therapy and possible complications.
- (3) Baseline clinical observation and monitoring of laboratory determinations over several weeks. The pre-treatment laboratory examinations are serial hemograms, sedimentation rates, urine analyses (at least

4), thrombocyte determinations, SMA-12 chemistry profile, LE cells and LE cell test, rheumatoid and antinuclear factors.

- (4) A definite plan of therapy. This plan is to give a test dose (Myochrysine, Gold sodium thiomalate or Solganal, aurothioglucose), then 50 mg. per week, repeated at weekly intervals until maximum benefit is obtained. This is usually after 15 or 20 injections, or 750 to 1,000 mg. Then to increase the time interval to 2, 4, or 6 weeks. This schedule has been quite satisfactory for those experienced in Gold treatment. However, there have occurred some situations of dosage and timing which had to be resolved by clinical response, clinical experience, and trial and error. Are Serum Gold level determinations helpful in these problems, such as the patient who has no response after 15 to 20 injections, the patient with some, but not complete, response at this time, and the patient on maintenance therapy with an acute exacerbation?

To find an answer, some serum Gold levels have been evaluated. Table No. 2 is an example of determinations of serum Gold in patients

Patients with acute flares on long-term maintenance therapy at 4-w. intervals presently on Gold at 2-wk. intervals.

No.	Interval	Dose	Gold Level	On Gold
PGS	2 wks.	50 mg.	380 ug%	4 years
THN	2 wks.	50 mg.	310 ug%	2.5 years
PYM	2 wks.	50 mg.	310 ug%	7 years

All patients on Solganal
Patients with only moderate response on long-term therapy

No.	Interval	Dose	Gold Level	On Gold
VGS	2 wks.	50 mg.	380 ug%	12 years
CBG	2 wks.	50 mg.	410 ug%	10+ mo.
FLR	2 wks.	50 mg.	340 ug%	6 years*
LEE	4 wks.	100 mg.	380 ug%	14 years

*Myochrysine — others on Solganal
Table No. 2 showing time interval, Gold dose, serum Gold levels and duration of chrysotherapy.

with acute flares on long-term maintenance therapy at 4-week intervals who were returned to Gold at 2-week intervals at the same dosage.

Note that they have been on Gold for several years, and that their Gold levels were all within the therapeutic range of over 300 ug%. These patients were continued on this schedule until the flare subsided and then returned to 4-week dosages. Table No. 2 also shows patients with only a moderate response on long-term therapy. Again, note that they have been on Gold for some time, and yet the Gold serum levels were all within therapeutic range. According to Dr. Lorber,^{6, 7} Gold blood level determinations are useful in adjusting Gold dosage. He finds that better results are obtained in those patients with Gold at or above a level of 300 ug%. Dr. Gottlieb and his co-workers⁸ and others^{2, 9} do not agree. We have run several Gold levels in addition to those shown. Our experience indicates that they have not been helpful in adjusting the individual dose or the timing. Further, it has been noted^{2, 7, 10} that there is no direct relation of blood or excretory levels to Gold toxicity. Since Gold blood levels do not indicate impending or even present toxicity, there appears to be some hazard in increasing Gold dosage over that conventionally used. It seems wise to follow the old method of 50 mg. per week for 20 weeks, and then increase the time interval. Shortening the time interval at the same dose until flares subside in long-term therapy, finding an adequate dose and time interval on those showing only moderate improvement, can be determined by clinical appraisal of the patient. Duration of the morning stiffness, pain, swelling, aspirin demand, and sedimentation rate are those guidelines.

This plan also calls for regular laboratory examinations. These are: Serially prior to therapy as noted, complete blood count, sedimentation rate, urinalysis after test dose, repeated after every fourth injection. Three of the eight rheumatologists, in answer to my request, agreed with this laboratory schedule. Some in-

dicated that blood and urine examination should be done before each injection, or urine analysis before each injection, and a blood analysis before every second injection, particularly early in the administration. Nevertheless, for non-hospitalized private patients, this schedule is more practical and adequate.

RECOGNITION OF GOLD TOXICITY AND THERAPY

Most important in detection of Gold toxicity is examination and interrogation prior to each injection, since it will detect more than 90% of the reactions, because they commonly occur in the skin, mouth, or tongue. Objective signs may be absent prior to the next injection, but serve as an indication of impending toxicity. Pruritis may be present without dermatitis and be transient. Dermatitis is nearly always pruritic. It may be generalized, but it is usually found on the unexposed areas. Several varieties of dermatitis have been described. The most severe is the exfoliative type. This may occur early in Gold administration. Mouth and tongue involvement may occur concomitantly or separately. It is usually preceded by the complaint of a sore mouth or tongue, or a bitter taste.

Mild dermatitis, Table No. 3, yields to symptomatic treatment, and usually Gold may be continued at a reduced dose. There seems to be a quantitative response in some patients who may tolerate 10 or 30 mg., but not the maximum dose. The substitution of another type of Gold may be also tried. If dermatitis becomes severe, Gold must be discontinued and corticosteroids

Mild and Transient: May continue Gold at reduced level — antihistamines — topical corticosteroids — change type of Gold.

Mild - Continuing: Discontinue Gold until reaction subsides, plus above measures. Consider systemic corticosteroid or ACTH.

Severe or Increasing: Discontinue Gold — local treatment. Give parental or oral corticosteroid 10-40 mgs. daily. ACTH optional.

Table No. 3 showing treatment of 3 phases of dermatitis due to Gold toxicity.

given. I prefer parental long-acting corticosteroid such as Depo-Medrol, Celestone, etc., to oral. It allows you to see your patient daily and to regulate dosage. ACTH is usually not required unless one suspects that some adrenal suppression is present. After the dermatitis has subsided, in certain instances when Gold is indicated in spite of a mild or continuing reaction, corticosteroids may be given concomitantly in small doses, such as Prednisone in 5 to 7.5 mg. daily. Table No. 4 shows our experience with patients on Gold therapy, both with and without corticosteroids. You will note that there is little difference in results when Gold is employed alone or with corticosteroids.

Therapy	No.	Therapeutic Response		
		Remission Grade 1	Improved Grade 2-3	None Grade 4
No Gold or corticosteroid	273	6%	70%	24%
Gold with corticosteroid concurrently	13	38-38%*	62-32%*	0-30%*
Gold alone	42	40%	56%	4%

*After corticosteroid was discontinued
 Table No. 4 showing therapeutic results without Gold or corticosteroid, with concurrent Gold and steroid, and with Gold alone. (H. E. Thompson, M. D. Rev. Med. Chile, Vol. 92 - April 1964).

PROTEINURIA AND OTHER TOXICITY

Proteinuria occurs very infrequently — estimated to be 1 in 2,000 — in patients receiving Gold. Interestingly, it is found in about the same percentage of patients not on Gold therapy. The incidence of proteinuria and kidney involvement is about the same as observed with Phenacetin intake. Mild intermittent, or mild recurrent proteinuria, or that observed in baseline studies, does not require discontinuance of Gold. Heavy proteinuria requires discontinuance of Gold and evaluation. The appearance of abnormal cellular elements in the urine requires immediate discontinuance of Gold and investigation. Nephritis and nephrosis can also occur. Here large doses of corticosteroid and ACTH, plus other therapy, usually are effective. In some reports¹¹ cytotoxic agents have been helpful. Certain reactions require permanent discontinuance of Gold and intensive treatment.

These are the blood dyscrasias, nephritis, nephrosis, and exfoliative dermatitis. Fortunately, these serious reactions rarely occur with Gold administration. In my experience, 1 hepatitis, 1 nephritis and no serious blood dyscrasias have been noted in over 5,000 patients treated. Toxicity may result from heavy metal poisoning.

Prompt recognition and vigorous treatment are necessary. Corticosteroids, adrenal cortical hormone, or both, should be given at high-dosage levels. Since these do not increase the elimination of Gold, chelating agents are available. The least noxious of these is N Acetylcysteine (Mucomyst), but it is said to be effective only in blood dyscrasias. D Penicillamine and Bal are effective. The latter, however, is extremely toxic, and I no longer use it. Seven of the rheumatologists queried concurred, and only two have utilized it recently.

POST-REACTION GUIDELINES

These are as follows: With a severe reaction give no more Gold. With a mild recurrent dermatitis, treatment may usually be continued and another type of Gold substituted. With a mild continuous dermatitis, it is usually possible to find a subtoxic dose and in certain cases corticosteroid may be also employed. All reactions require frequent observation and laboratory monitoring.

SUMMARY

Severe Gold toxicity occurs in an estimated 0.2 to 5% of rheumatoid arthritis patients receiving chrysotherapy by experienced rheumatologists. Interrogation and examination will detect over 90% of the reactions. Serum Gold determinations are not helpful therapeutically or in toxicity detection. Reactions are in general easily recognized and treatment is usually successful.

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PSEUDOMONAS DISC SPACE INFECTION IN AN OCCASIONAL HEROIN USER



SAMUEL S. KAPLAN, M.D.

This report is presented to alert the clinician to the orthopedic manifestations of *Pseudomonas* vertebral osteomyelitis in occasional heroin users. The patient may present with bizarre history of pain and appear to simply be using his back pain as a mechanism of extracting drug prescriptions from the physician. In reality, the patient may well have a severe painful infection involving the disc space. The likelihood of the infective agent being *Pseudomonas aeruginosa* is herein pointed out and the necessity of organism specific diagnostic procedures is discussed.

The purpose of this report is to bring attention to one of the orthopedic sequela of occasional heroin use, and to stress the increasing incidence of *Pseudomonas* as a cause of osteomyelitis in the drug-abuse patient. Most articles have come from large institutions, where heroin addicts frequent the emergency rooms and medical wards, or from the Armed Force hospitals with large populations of occasional drug users.^{1-3, 6, 11} The following case report, by this practitioner, is presented to highlight the clinical presentation of this orthopedic problem in the private practice setting. It is here that society's stigmata against the heroin user may obscure the clinical findings needed to establish the diagnosis of disc space infection.

CASE REPORT

A twenty-four-year-old man presented with the onset of acute back pain occurring two months prior to the date of my initial examination. He denied any incident of trauma. He said the pain localized to the dorsolumbar portion of his back and radiated to the left flank. The patient was initially seen by a physician in California. He was hospitalized and an intra-

From: 1402 N. Miller Rd.,
Scottsdale Az. 85257 (Dr. Kaplan).

venous pyelogram was performed and reported as negative. He was seen in consultation by an orthopedic surgeon who performed local superficial injection of the painful area without relief to the patient. He was then followed as an out-patient and maintained on Codein for pain relief. Diathermy did not help. Three to four weeks prior to the initial visit, he sought chiropractic aid. This, accordingly, gave only mild relief and the patient sought aid at the Los Angeles County Hospital. There, he was told that nothing was wrong, and advised to have a psychiatric hospitalization. He was unwilling to commit himself and returned home, to Arizona, to live with his parents. He and his parents arrived in the office. The parents were literally supporting the boy who appeared to be in excruciating pain. The patient then presented his story in a histrionic manner. He described the pain in his back as "vice-like". Throughout the entire examination he thrashed about, moaned and groaned with pain that seemed entirely out of proportion to the physical findings presented below. A significant social history was that the patient had been working up until the time of the acute onset of his back pain. For the past five years he had occasionally lived at home with his parents in between various jobs and traveling. He admitted to be an occasional user of heroin. His last episode of mainlining had been approximately four weeks before. He said that he did this mainly for pain relief, but once the effects of the drug had worn off, his back pain returned. He specifically denied ever being addicted to heroin and stated that prior to onset of his back pain, he had not used drugs for a three-week period.

The review of systems was positive for drug use, as stated above, and for tinnitus secondary to a large amount of Excedrin ingestion for pain relief. Although I expressed disbelief in the extent of his discomfort, his parents assured me that his complaints were not any less demonstrative at home. The physical exam at the office was recorded as temperature 100 degrees, pulse was 88/min., and respirations were 24/min. and short but not labored. Blood pressure was 120/70. Significant findings were a tense abdomen without rebound or point tenderness. The liver was percussed one finger breadth below the right costal margin but it did not appear tender. Examination revealed point tenderness at the L2-3 interspace. Gait could not



Figure 1

The initial x-ray taken at the office. Note the irregularity of the end plates and the slight narrowing of the disc space at L2-3.

be tested as the patient was in too much pain. Straight-leg raising was positive bilaterally at about 30 degrees. However, the deep tendon reflexes were equal bilaterally and there was no evidence of either gross motor or sensory deficit. The radiologist's interpretation of the original x-rays, taken at my office, was "irregularity of the end-plates as an end result of a juvenile epiphysitis". (See Fig. 1) Another radiologist's impression was normal. However, it was my impression that this very well could represent an early disc space infection. Laboratory work-up showed an elevated sedimentation rate of 41 mm/hr. with a normal white count and differential. The patient was hospitalized. All other laboratory work-up was within normal limits. Under x-ray control a needle biopsy of the L2-3 interspace was performed. (See Fig. 2) The patient was started empirically on an intravenous antibiotic regimen which included Penicillin and Nafcillin. The following day the patient was not clinically improved and initial cultures showed the growth of *Pseudomonas aeruginosa*.



Figure 2

Guide pin in place just prior to taking a biopsy core. Note, the disc space narrowing is less noticeable with improved parallax of x-ray beam to plate.

Initially, this was thought to be a contaminant. However, all subsequent growths, including fungal cultures, continued to grow pure cultures of *Pseudomonas aeruginosa* sensitive to Carbenicillin, Gentamicin, and the Sulfonamides. The patient, therefore, was started on appropriate antibiotics; a combination of Carbenicillin, 30 gr. per day and Gentamicin, 80 mg. q.i.d. A body jacket with single leg extension was applied, and the patient was followed serially with sedimentation rate and appropriate neurologic monitoring for drug toxicity. While in the hospital his sedimentation rate had risen from 44 to 50. Eventually, it fell to 21 and he became asymptomatic. He was sent home at bed rest in his body jacket, and was followed as an outpatient. Two and one-half months after initial diagnosis his sedimentation rate was 6 and he was pain-free. His antibiotic and body jacket were discontinued. Follow-up 9 months later showed bony union at the affected disc level. (See Fig. 3) Erythrocyte sedimentation rate was 6, and the patient was gainfully employed and symptom-free.



Figure 3

Last x-ray taken nine months after initial treatment showing complete narrowing and bony union at L2-3.

DISCUSSION

The private practitioner must be ever wary of an orthopedic presentation involving joints or disc space infections as the presenting symptom in even an occasional heroin user. Cherubin,¹ in 1967, reported extensively on the various medical complications of narcotic addiction. These are now well known. They include sudden death from intravenous injection, tetanus, bacterial endocarditis, thrombophlebitis, sepsis, foreign body emboli, and thrombosis in the pulmonary arteries resulting in cor pulmonale, pneumonias, lung abscess, hepatitis and hepatic dysfunction, and finally malaria. However, it was not until Tindel¹⁰ reported septic arthritis due to *Pseudomonas aeruginosa* in 1971, that clinicians became more aware of the orthopedic presentation in drug users, and the prevalence of *Pseudomonas* as the infective agent.

Many reports have been published on pyogenic vertebral osteomyelitis. Waldvogel¹¹ and others reported the predominance of *Staphylococcus aureus* as the offending organism. None were due to *Pseudomonas aeruginosa*. In 1970,

Schroeder⁸ and his associates pointed out that all cases of *Pseudomonas* osteomyelitis had occurred after surgery or instrumentation such as cystoscopy. However, it was not until Lewis, Gorbach, and Altner⁵ described five cases of spinal *Pseudomonas* in heroin users in the New England Journal in 1972, that more awareness was established for a predilection in the heroin user of *Pseudomonas* disc space infection. It was in the same year that Selby and Pillay⁹ described two cases of spinal *Pseudomonas* in the Journal of Neurosurgery. More recently, Patzak⁷ and associates reported 14 out of 25 cases of vertebral disc space infection due to *Pseudomonas* in the heroin user, at the Annual Rheumatism Association meeting in Los Angeles. Wiesseman, Wood and Kroll¹² reported five additional cases of *Pseudomonas* vertebral osteomyelitis in heroin addicts at the annual meeting of The American Academy of Orthopaedic Surgeons in Las Vegas in 1973. Finally, in 1974, Light and Dunham⁶ have reported two cases of *Pseudomonas* vertebral osteomyelitis in occasional heroin users in the United States Army.

CLINICAL MANIFESTATION

Without exception, all patients presented, as did this patient, with back pain of various duration. None reported a history of trauma, and there was a dearth of physical findings. Most reports indicated, as did this illustrative patient, that the subject did not demonstrate the typical findings indicative of an infectious process. The white blood count was usually normal. Temperature was rarely elevated. Significant, however, was the unanimity of the elevated erythrocyte sedimentation rate and the eventual discovery of narrowing of an intervertebral disc space. Narrowing was usually determined with serial roentgenograms.

TREATMENT

The treatment for *Pseudomonas* disc space infection has traditionally been one of immobilization and specific antibiotic therapy. The antibiotic therapy should be begun as soon as the diagnosis is established and usually is continued for a minimum of six weeks. Currently, the drug of choice is a combination of Carbenicillin and Gentamicin, the recommended dosage being at least 30 grams of Carbenicillin daily with Gentamicin in sufficient amounts to yield blood levels of 4-8 micrograms per milliliter. As in this case, the Gentamicin and Carbenicillin were discontinued after the patient had a good clinical

response as manifest by decreased pain, ability to ambulate without difficulty, and a falling sedimentation rate. The patient should be followed until good bony union is established. Repeat sedimentation rate should be obtained to insure that there is no exacerbation of old disease.

Review of the current literature gave occasional consideration to surgical intervention with the removal of infected granulation tissue and fusing of the involved disc space.^{9, 11} In general, however, if there is an adequate clinical response to bed rest and appropriate antibiotics, surgical intervention should not be necessary.^{5, 6, 8, 12}

CONCLUSION

As pointed out in this article, the optimum treatment depends on a high index of suspicion. Primary osteomyelitis should be suspected in any heroin user presenting with localized pain. This consideration should not be altered even though the patient is only an occasional user. Once the diagnosis has been established, proper immobilization and bed rest are mandatory to relieve muscle spasm and insure healing. Organism specific antibiotic therapy should be begun at once and continued until the sedimentation rate has fallen to normal levels.

The physician can be easily misled or confused by the initial presentation of a known heroin user who seems to be having an undue amount of pain and demands pain relief. The physician then may manifest great reluctance to "feed the habit" of a known drug abuser and can inadvertently disregard certain clinical evidence establishing the diagnosis of disc space infection.

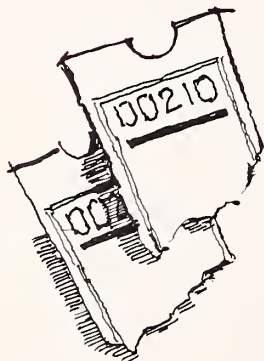
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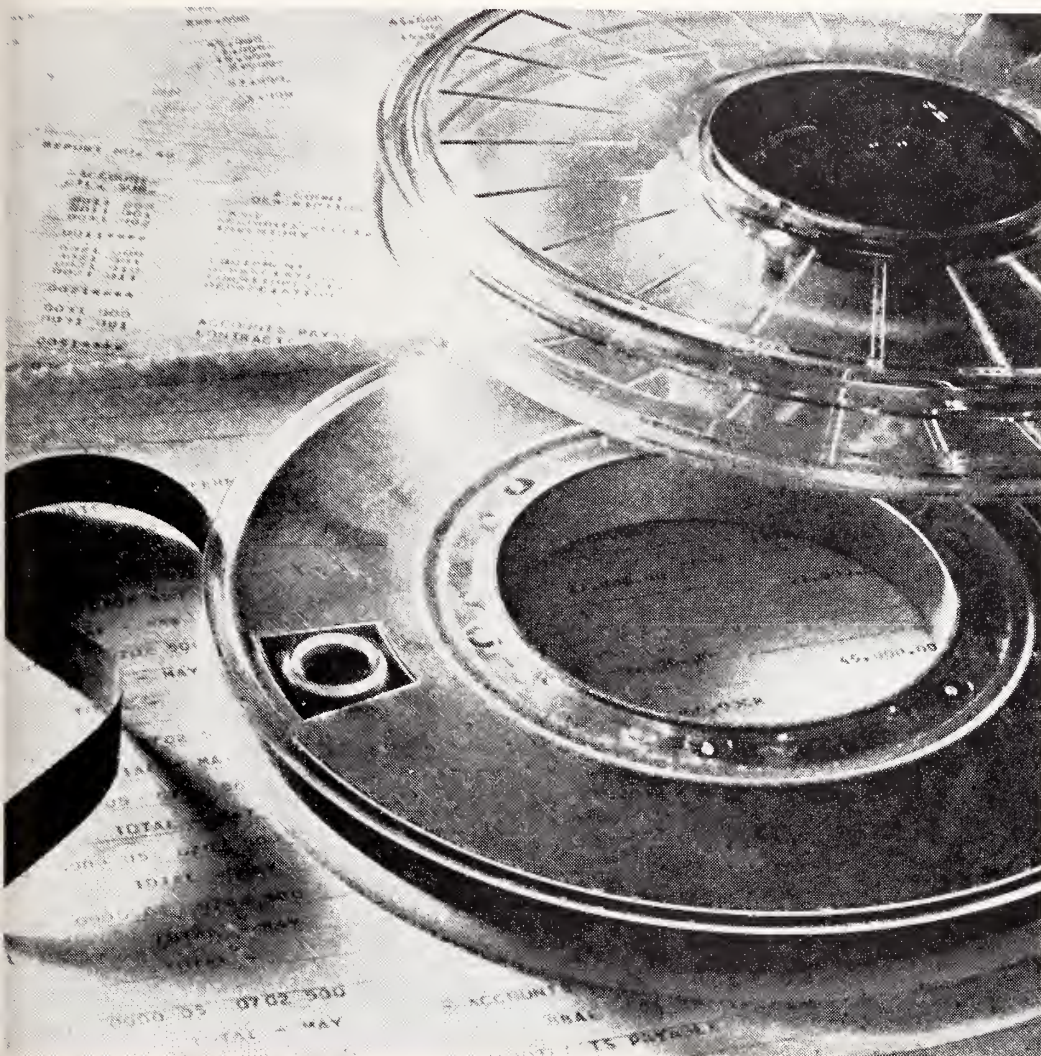


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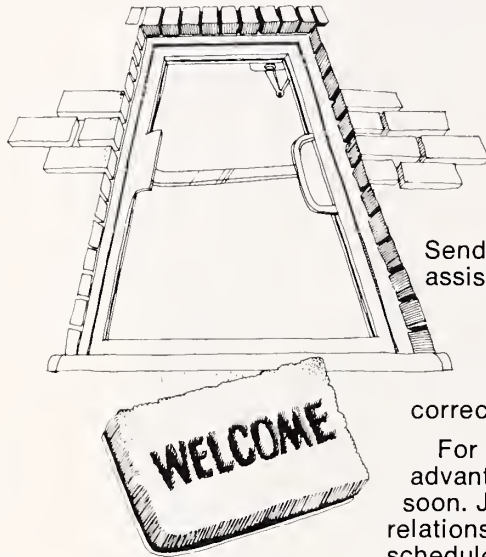


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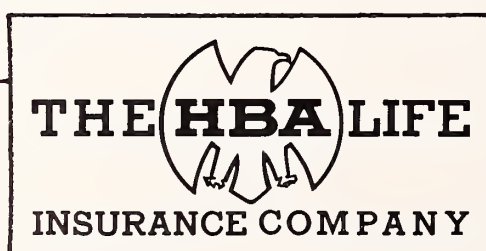
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ANNOUNCEMENT

The Board of Directors of this Company has elected Carl T. Kirchmaier, M.D. to the position of Medical Director. He has served as Associate Medical Director of this Company since March 1972.

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THE 1974 NOBEL PRIZE

The foundation for modern cell biology with elaboration of this work is the basis for the awarding of the 1974 Nobel Prize in Physiology and Medicine. The prize — 125,000 dollars and the international honor that goes with the award — was awarded to three scientists who did their major work at Rockefeller University which has already produced twelve other Nobel laureates. Dr. Albert Claude, 75, of the Free University, University of the Brussels' Institute Jules Bordet, a naturalized American, laid the foundation for modern cell biology with his work at Rockefeller U. between 1929 and 1949. He used the recently developed electron microscope and explored cells and developed techniques for separating cell components in a centrifuge in order to help determine their functions. Dr. George E. Palade, 61, of Yale University's School of Medicine, a Rumanian-born researcher, joined Rockefeller U. in 1946 and expanded Claude's work. He delineated the fine structure of the mitochondria (bacteria-like bodies that probably joined

the cell early in the evolutionary process and helps the cell to "breathe") and discovered small granular components called ribosomes which were later found to help manufacture the proteins essential for the normal functioning of the cell. Dr. Christian R. de Duve, 57, of New York's Rockefeller University and Belgium's University of Louvain, joined Rockefeller U. in 1962. He continued to refine the fractionalization techniques of Claude. His studies led to the discovery of lysosomes (enzymes that break down the substances ingested by the cell — and in some diseases, destroying the cell itself).

Clinicians are dedicated to the restoration of their patients to normal productive living. We recognize that without the understanding of cellular functions most disease control and modern drugs would not be possible and are grateful to Drs. Claude, Palade, and de Duve.

John R. Green, M.D.



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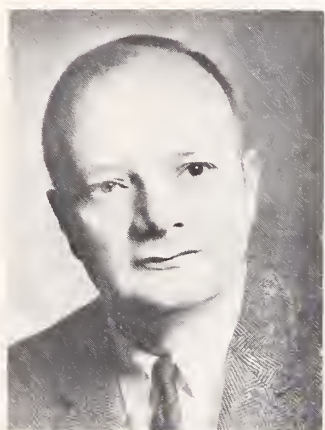
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Dean's Page

DEPARTMENT OF ANESTHESIOLOGY



NEAL A. VANSELOW, M.D.

Very few medical subspecialties have the distinction of being "all-American" in concept. On October 16, 1846 a sophomore medical student at Harvard Medical College, W. T. G. Morton, administered ether by inhalation to one Gilbert Abbott, a young man with a small neck tumor. Dr. John Collins Warren, Professor of Surgery, successfully removed this tumor with no discomfort to the patient. The field of anesthesia was born. Professional interest in the potentials of this discovery soon waxed in the shadow of the Brobdignagian advances made by surgery during its "golden era" in the late 19th and early 20th centuries. Anesthesia, like infection and hemorrhage, was considered more a necessary surgical complication than a true scientific art. Many senior practitioners can remember the days when the most junior member of the surgical team was extemporaneously cast into the role of "anesthetizer," unprejudiced either by knowledge or experience. A few pioneers became interested in anesthesia as a medical discipline in the 1920's and 30's, and incorporated it into the surgical sciences. In 1941 interest was great enough that official recognition was awarded

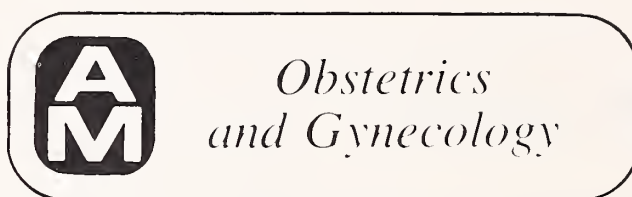
the specialty of Anesthesiology after an historically interesting and somewhat tumultuous debate within the American Medical Association and the American Board of Surgery.

On September 23, 1974, the Board of Regents created a separate Department of Anesthesiology at the University of Arizona College of Medicine. The functions and goals of the embryonic Department are manifold. As the only residency program in anesthesiology in the Southwest between Dallas and San Diego, it has a great responsibility in graduate education. Anesthesiology is a field in which the demand for manpower chronically outstrips the supply, and one of the Department's primary goals is to ameliorate this crisis as far as it is able in our own geographic area. Approved for anesthesiology residency training, the Department also offers Fellowships in the special areas of Pain, Cardiac Anesthesia, and Research. Undergraduate education is emphasized. It is the philosophy of the Department that anesthesiology is not a narrow technical field. Airway control, resuscitation, management of the unconscious patient, pain control, and clinical pharmacology are necessary skills that can be applied to whatever field of medicine the undergraduate eventually enters. Since production of new concepts in medical care are part and parcel of the academician's role, research is emphasized by the new Department second only to teaching. In the 36 months anesthesiologists have been members of the faculty at the University of Arizona, there have been 32 scientific publications written by this small group. Research interests are varied and include mechanisms and laboratory diagnosis of anesthetic-induced hepatitis, several new clinical drug studies, introduction of new monitoring techniques, drug interactions in the anesthesia state, and biochemical mechanisms of pulmonary oxygen toxicity. In addition to clinical responsibilities of teaching safe, scientific anesthesia, the Department is active in a large Pain Service, recovery room, and in Surgical Intensive Care. The faculty members teach a large proportion of the Pharmacology Course and participate in teaching in numerous disciplines such as neurophysiology, Pulmonary physiology, and management of shock. Conferences and Visiting Professorships are sponsored and open to all practicing anesthesiologists in Arizona.

Anesthesiologists venture more and more from specialty domains of the operating room and delivery suite to amalgamate their special skills with other physicians in total patient care. It is the goal of the newly created Department of

Anesthesiology to serve the State of Arizona and the Southwest by educating individuals to provide these health care refinements.

Neal A. Vanselow



THE MATERNAL AND CHILD HEALTH CARE COMMITTEE

The June, 1974 issue of Arizona Medicine carried the announcement by David Pent, M.D. that the journal would thereafter have a regular monthly page devoted to Obstetrics and Gynecology under the sponsorship of the Arizona Obstetrical and Gynecological Society and the Arizona Section of the American College of Obstetricians and Gynecologists. The primary purpose of this page was to provide a forum for meaningful discussion between physicians of other specialties and practice areas with common interests in the care of women.

Since the care of women deals in large part with reproductive physiology and pathology, one common area of interest extends to the welfare of infants and children and interaction with pediatricians and family practice specialists.

Just as there was a need for a common forum, there was a need also for a common action group to deal with the challenges and problems and in the common areas of interest.

The opportunity to test the validity of such a common action group was realized in 1972, when the House of Delegates of the Arizona Medical Association approved the creation of an ad hoc Maternal and Child Health Care Committee.

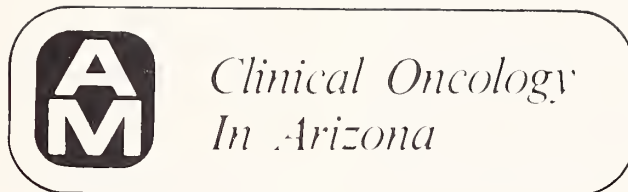
The task of setting up the committee was greatly eased by following the elcar cut guidelines of the American Medical Association's Committee on Maternal and Child Health Care Committee. It should be noted here that Belton Meyer, who was one of the co-authors of these guidelines was also an active supporter of the concepts of a state committee, a fact which further simplified the developmental task and augured well for its success.

The value of a Maternal and Child Health Care Committee was well demonstrated so at the 1974 annual meeting of the Arizona Medical Association, it was made a standing committee.

Basic to the concept of this committee was that it must have representatives from all involved specialties and their societies including Obstetrics and Gynecology, Pediatrics and Family Practice and that it must also have representation from the Public Health sector as well as from the private practice sector. Participation was also invited from the Osteopathic Association. With such a constitution, the Committee can function as the coordinating force for the efforts of this diverse group in promoting maternal and child care.

The work of the committee was apportioned to four Sections: A Section on Services for Children; A Section on Maternal Services; Data Collection and Analysis; and a Section on Perinatal Planning. Although the parent committee is appointed by the Board of Directors, recommendations for members are invited from the specialty associations involved in maternal and child care activities. The chairman of the sections can request members from other related groups such as the nursing associations, hospital administration and from our academic institutions. This provides a broad base of talent which is helpful for all of the sections, but especially so for data collection and analysis and for developing regional perinatal plan.

Arizona is recognized as a leader in the development of regional neonatal care and the section on perinatal planning is actively studying the extension to perinatal regionalization. More of that later!



MANAGEMENT OF CHORIOCARCINOMA AND RELATED DISORDERS

JOHN F. WURZEL, M.D.

This new section in Arizona Medicine is specifically targeted to the subject of cancer care in the state of Arizona. Recognition of the importance of cancer management has been underscored by the establishment of the conquest of cancer as a national goal. In this column, current concepts in cancer management and recent advances in cancer research that are relevant to Arizona, will be discussed each month. Cancer therapy is currently changing at an extraordinarily rapid rate, and the views expressed on this page should not be considered as static recommendations. The editors of this column will select key topics and invite interested physicians and allied health professionals from Arizona to write components related to areas of their expertise in cancer.

Editors: Paul H. Duffey, M.D., F.A.C.P., Hematology-Oncology, The Tucson Clinic, Tucson, Arizona 85716; Sydney E. Salmon, M.D. Professor and Head, Section of Hematology and Oncology, University of Arizona College of Medicine, Tucson, Arizona 85724; Robert H. Thoeny, M.D., Dir., Radiation Oncology, Good Samaritan Hospital, Phoenix, Arizona 85006.

Gestational trophoblastic disease (GTD) is a spectrum of disorders of the syncytiotrophoblast which includes hydatidiform mole, chorionadenoma destruens and choriocarcinoma. Despite the well known bizarre appearance and biology of GTD, these disorders are often diagnosed late in their course and quite frequently managed suboptimally. One of the triumphs of modern cancer therapy is that even metastatic choriocarcinoma is usually curable. The average incidence of hydatidiform mole in the U. S. is approximately 1 in 2,000 gestations. The incidence in the Mexican-American woman, however, approaches that of the Southeast Asian woman and is quoted at 1 in 200 to 1 in 400 gestations. Approximately 1,500 to 2,000 cases of GTD will occur in the U. S. annually, but a somewhat disproportionately high incidence rate will occur in Arizona. This spectrum of tumors is unique in that excessive quantities of human chorionic gonadotropin (HCG) are produced. Measurement of the HCG marker production by the tumor is invaluable for diagnosis and clinical evaluation.

Currently most clinicians believe that GTD represents a spectrum (other than different disorders) and that the virility of the tumor is related to factors inherent in the trophoblastic tissue itself, as well as immunologic relationships to the host. The three variants of GTD are dis-

From: Dept. of Obstetrics and Gynecology, Arizona Medical Center, Tucson, AZ 85724 (John F. Wurzel, M.D., Assoc. Prof. and Director of Gynecologic Oncology.)

cernable histologically. Hydatidiform mole is easily recognized grossly, as well as histologically, however, its histologic picture is of little value in determining its potential malignancy. About 20% of mole will progress to invasive trophoblastic disease. (Two percent will become choriocarcinoma and 17% will become chorioadenoma destruens). In the trophoblastic proliferation of the mole, both the cytotrophoblast and syncytiotrophoblast are involved, although one cell type may dominate. There is no histological evidence of invasion.

Chorioadenoma destruens, (invasive mole), has evidence of chorionic villi remaining and may invade the uterine wall, pelvic blood vessels, vulva and vagina. Metastases to other parts of the body are uncommon.

Choriocarcinoma consists entirely of trophoblastic proliferations without evidence of the villi. Invasion of the uterine musculature is associated with marked hemorrhage and necrosis at the invading border of the tumor. Metastasis to the lungs is common, and extra pelvic metastases may also include the brain, liver or other sites. Choriocarcinoma is preceded by molar pregnancy in 50%, abortion in 30%, and by normal pregnancy or ectopic tubal pregnancy in 20% of cases. The clinical features of this disease are quite uniform and allow for early diagnosis, however, these features are sometimes overlooked because of choriocarcinoma's variety. Therefore, the key to diagnosis is SUSPICION, — this single factor cannot be overstressed. GTD tends to occur in young adult women in the U. S. The major symptom of GTD is vaginal bleeding between the third and fifth month of pregnancy. Virtually all patients will have abnormal bleeding. Cramping — "threatened abortion" is common. The uterus is enlarged beyond its expected size in at least half of the patients. Fetal heart tones are absent, as are fetal parts and movements. Toxemia of pregnancy and/or hyperemesis gravidarum occur in 1/5 to 1/4 of cases. Thyrotoxicosis, (apparently of pituitary in origin) is less common. Ovarian enlargement (due to theca lutein cysts) will be palpable in 10-15% of patients.

Faced with these strongly presumptive signs and symptoms, the diagnosis of mole can be established simply. B-Scan sonography will readily differentiate between mole and normal intrauterine pregnancy. If B-Scan is not available, injection of 20-25 ml. of Hypaque 50%, or Reno-

graffin-60 into the uterine cavity will beautifully outline the vesicular fenestrated pattern of the hydatidiform mole. (These dilute, soluble dyes are considered safe in normal pregnancy.) When the diagnosis of mole is established, baseline physical examination with careful search for pelvic and/or distant metastases, chest x-ray, hemoglobin and an HCG determination are required. To follow these patients the physician must have ready availability of quick and accurate quantitative HCG by radioimmunoassay. Several clinical laboratories in Phoenix and Tucson as well as the Endocrine Laboratory of the Obstetric Gynecology Department at Arizona Medical Center, are capable of performing HCG radioimmunoassay. Radioimmunoassay is strongly preferred, other methods should be abandoned. Immunoassay using a "pregnancy test" is of less accuracy in following the titers of gonadotropin and is not sensitive at the low levels necessary to distinguish between normal pituitary gonadotropin and that due to trophoblastic disease.

THERAPY

Once the diagnosis is established, treatment should be undertaken as soon as baseline studies are completed. There is currently strong difference of opinion, as to whether evacuation of mole, or hysterectomy to remove the GTD in the older woman who desires no further child bearing, should be undertaken during a course of "prophylactic chemotherapy." Authors supporting both positions make very strong points, but I feel that if a good laboratory is available and the patient is closely followed, prophylactic chemotherapy is unnecessary. (Approximately 80% of patients receiving prophylactic chemotherapy would not require it). Where suction curettage is available, the mole should be evacuated by dilatation suction curettage under oxytocin infusion. If suction curettage is not available, the uterus may be stimulated with oxytocin until it expels the mole and then the markedly smaller uterus can be curetted with a very large, sharp curette until all areas are felt to be thoroughly cleaned. Hysterotomy is rarely warranted. The patient should then be followed with weekly HCG titers. Gonadotropin values should quickly return to normal levels. With radioimmunoassay, HCG should be less than 100 milli-international units (M.I.U.) per ml of serum within six to eight weeks of the time of evacuation of the tumor. Three consecutive week-

ly HCG titers below 100 M.I.U. per ml of serum can be accepted as presumptive evidence of cure. The patient should then be followed with monthly gonadotropin levels for six months and bi-monthly evaluations for the next six months. During the entire year, it is wise to suppress the patient's pituitary gonadotropins and prevent pregnancy by using oral contraceptives. If, during the six to eight weeks post evacuation, the HCG titer *does not fall*, or if an initial fall plateaus, or if there is a ten-fold rise in HCG, the patient has evidence of residual, or advancing trophoblastic disease requiring further management.

Following cure of a benign mole, the patient will stop bleeding quickly, the uterus will involute normally and she will be free of symptoms. If chorioadenoma destruens or choriocarcinoma ensues, continued bleeding is common, and the uterus fails to involute. With invasion of the myometrium, the uterus may actually enlarge and focally soften. These physical findings, or the failure of gonadotropin levels to return to normal are indications for re-curettage of the uterus. If there is no evidence of lung, brain, liver or pelvic metastasis, uterine invasion is most likely. Medical oncologists and gynecologists familiar with the cancer chemotherapy of choriocarcinoma initiate systemic chemotherapy at this point of invasive trophoblastic disease. Further local surgical care may also be recommended by the specialist. If repeat curettage indicates myometrial invasion, hysterectomy plus chemotherapy, is in my opinion, the treatment of choice. It is important to recognize, however, that invasion of the trophoblast deep into the uterine wall may all be sub-endometrial, and repeat curettage may be negative despite pelvic and/or distant metastases. Metastases themselves, particularly in the lungs, may be the first indication of invasive trophoblastic disease in the patient felt to be otherwise normal. Vaginal and vulvar metastasis also occur in the patient whose uterus may be negative for disease.

Patients at high risk to develop invasive trophoblastic disease are the older woman with hydatidiform mole and those with an initial ACG titer of greater 20,000 M.I.U. per ml of serum. Persistence of symptoms for greater than four months also places the patient in a high risk group to develop choriocarcinoma with metastases. If these high risk patients do not have rapid

lysis of their gonadotropin levels, they should be treated with chemotherapy. Hysterectomy is optional, or advisable, depending on the local disease and the desire of the patient in regard to further childbearing. If physical examination, chest x-ray, liver function studies, neurologic evaluation indicate the presence of metastases, vigorous chemotherapy must be instituted.

Brain metastases and/or liver metastases adversely influence prognosis. Quick action on the part of the physician in establishing a diagnosis of GTD, evacuating the uterus, obtaining baseline studies and weekly follow-ups, and ready consultation with the qualified gynecologists or medical oncologists, will virtually always improve the patient's chances for cure. The cure rate in patients with symptoms for less than four months, who have an HCG titer of 20,000 M.I.U. per ml of serum, and who do not have brain and liver metastases, approaches 100%. In the very high risk group of patients, aggressive combined chemotherapy, although very toxic, still yields 50-70% cure rates, at regional centers.

Methotrexate and Actinomycin-D are by far the most popular drugs used in treatment of GTD. When used as single agents or used sequentially, results are quite predictable and usually excellent. In the very high risk patient with brain and/or liver metastases, initial chemotherapy should be a combination of Methotrexate, Actinomycin and either Cytoxan or Leukeran. Combination chemotherapy is quite toxic, and has a recorded mortality of approximately 15%. Availability of platelet and leukocytes transfusion at regional centers markedly reduces the morbidity and mortality of combination chemotherapy. Cure rates have improved markedly by going directly to combination, rather than single drug or sequential therapy in high risk patients. Radiation therapy to total brain and/or liver is also added to chemotherapy in many regional centers.

In summary, one should be pregnant puerperal, or post abortal patient with bleeding and the other common signs mentioned above. Baseline physical examination, HCG titers, liver function and metastatic studies are mandatory. Early evacuation and close scrutiny of weekly gonadotropin titers, will result in outstanding cure rates in this unusual, but potentially lethal malignancy of pregnancy.

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Seminars in Endocrinology and Metabolism

HYPOGLYCEMIA: CLINICAL IMPLICATIONS PART I: REACTIVE HYPOGLYCEMIA

MARSHALL B. BLOCK, M.D.

Commencing with the present issue of Arizona Medicine a continuing series of articles entitled "Seminars in Endocrinology and Metabolism" will be published. The purpose of these short review articles is twofold. First, due to the rapid proliferation of new knowledge in the field of endocrinology and the multiple tests available for their evaluation, short, clinically oriented reviews would enable the physician to keep abreast of these newer developments as they relate to their practice. In addition, with great stress being placed on voluntary recertification in many subspecialties, reviews such as they could serve as an authoritative, succinct teaching forum. The editors will endeavor to accomplish these goals by utilizing the talents of practicing physicians as guest contributors to this series. Feedback, both positive and negative, is encouraged in order to help us fulfill these objectives.

Recently, there has been a great deal of interest in the possibility that patients with late afternoon symptoms of tiredness, weakness and lethargy may actually be experiencing reactive hypoglycemia. Since the definition of reactive hypoglycemia in the past has been variable, it is not surprising that confusion exists both in the scientific and lay community concerning what is meant by this diagnosis. Classically, patients were considered to have reactive hypoglycemia if, during a 5 hour oral glucose tolerance test, a low blood sugar (arbitrarily chosen as less than 50 mg. %) was reached irregardless of symptoms. When it recently became apparent that 25% of normals can have asymptomatic blood sugars less than 50 mg.% during an oral glucose tolerance test,¹ the diagnosis of reactive hypoglycemia became even less clear. In 1972, a new classification was proposed which clinically has proven helpful.^{2,3} By setting up stringent and meaningful criteria for inclusion without setting an arbitrary low blood sugar concentration, Hofeldt, et al, has helped unravel the confusing nature of the problem.

They propose that in order to make the diag-

Reprint requests to: 341 North 5th Ave.,
Phoenix, Az. 85013 (Dr. Block).

nosis of reactive hypoglycemia the following criteria have to be fulfilled. Symptoms in daily life which suggest that hypoglycemia is occurring after meals need to be present. These same symptoms have to be mimicked during an oral glucose tolerance test and have to coincide with the nadir in blood glucose during that test. A rise in serum cortisol temporally related, during the oral glucose tolerance test, to the patient's clinical symptoms and the blood glucose nadir needs to occur.

Thus, a 5 hour oral glucose tolerance test would be needed in patients complaining of symptoms during daily life, to substantiate whether these symptoms can be reproduced during such a test. If they are, in addition to the blood glucose sample obtained, a serum specimen for plasma cortisol should also be obtained at the time of symptoms. The only drawback to this approach is that not all patients with reactive hypoglycemia will, under the artificial circumstances of a glucose tolerance test, exhibit symptoms. It may be necessary to repeat the study at a later date in order to demonstrate the expected changes, especially if the patient's symptoms are persistent and classical.

Although it is somewhat arbitrary to separate fasting from reactive hypoglycemia in terms of relationship to the last meal, clinically this distinction is very important. Symptoms occurring within five hours of a meal are generally considered to represent reactive hypoglycemia, while symptoms occurring after a more prolonged fast such as 8 to 10 hours, are considered examples of fasting hypoglycemia. The importance of this distinction lies in the more serious causes of the latter condition which will be discussed in detail in the second part of this series on hypoglycemia.

Invoking the above classification several varieties of reactive hypoglycemia have been described. Postprandial low blood sugars occurring within one to two hours after eating have been described in patients with gastrointestinal symptoms who have had preceding surgical intervention. Similar findings have been found in patients who have not had any prior operative procedures and has been called alimentary hypoglycemia. It is thought that the rapid emptying of stomach contents into the duodenum produces amplification of the normal entero-pancreatic hormonal signals which result in greater than

normal secretion of insulin. This results in a rapid decline in the blood glucose level so that by 1-1½ hours after eating, symptoms are experienced by the patient. In contrast, in all the other varieties of reactive hypoglycemia, symptoms usually occur three to four hours postprandially. Several varieties of this late type of reactive hypoglycemia have been described. Before marked abnormalities of carbohydrate tolerance can be noted, this late variety of hypoglycemia can be experienced in patients destined to develop diabetes mellitus.⁴ It is, however, not known what percentage of patients with the diabetic-type of reactive hypoglycemia will progress to marked hyperglycemia. Another type of hypoglycemia has been detected in various hormonal deficiency states. Probably the most common is that which is seen in hypothyroidism. Adrenocortical insufficiency is another relatively rare cause for the syndrome. However, in the vast majority of patients with the late variety of reactive hypoglycemia, the etiology is not known. These patients have been described as having "idiopathic" reactive hypoglycemia and probably constitute close to 50% of any large series.³ The pathogenesis of these varieties of reactive hypoglycemia is not completely known. Measurements of peripheral insulin concentrations have indicated that most patients with the hormonally deficient and idiopathic varieties of reactive hypoglycemia have delayed insulin secretion which results in peak insulin levels occurring at an inopportune time in relation to blood sugar levels, thus producing hypoglycemia. On the other hand, diabetic patients with reactive hypoglycemia do not appear to have delayed insulin secretion when compared to patients with diabetes mellitus who did not exhibit symptoms. Thus, the etiology of this syndrome cannot be solely explained by abnormalities in insulin secretory dynamics.³ Other investigators have postulated that a deficiency of glucagon may be involved.⁵ This would tend to inhibit hepatic glucose output and thus perpetuate the normal transition from the fed to fasting state. However, other studies have failed to support these initial observations.^{6,7} At the present time then, the cause for the late variety of reactive hypoglycemia is not readily apparent, but is probably multifactorial.

Therapeutically, dietary manipulations remain the mainstay of any approach to the patients with these symptoms. For the alimentary or early

form of reactive hypoglycemia, small frequent feedings may prove beneficial. Furthermore, a diet high in protein and low in carbohydrate may decrease the signal generated by the small intestine to the pancreas resulting in decreased insulin secretion. If this proves ineffective, anticholinergic medications may be tried in an attempt to delay or promote more normal gastric emptying. However, the possibility of gastric stasis and recurrence of ulcer disease must be kept in mind. A trial of Phenformin in small dosage may inhibit glucose absorption from the small intestine by producing cytotoxic changes in the epithelium. This has also been tried with limited success. For the late varieties of reactive hypoglycemia, diet again is crucial. As for the alimentary form of reactive hypoglycemia, a diet high in protein and low in carbohydrate with six small meals many times proves helpful. In the diabetic variety of reactive hypoglycemia, the preceding type of diet with strict attention to total caloric intake may alleviate the symptoms as weight is lost. In the hormonally deficient variety of reactive hypoglycemia, replacement medications usually produce the desired response with correction of the underlying problem. In the idiopathic group very close attention to diet usually brings about a partial response. Agents in addition to those mentioned above have been used with limited success in this form of the disease. In particular, Dilantin and Dyazoxide have been tried. Both seem to work by inhibiting insulin secretion from the beta cell. Unfortunately, response to this form of therapy is variable and, at present, experimental.⁸

Finally, it should be emphasized that the treatment of reactive hypoglycemia with adrenocortical extract and various other potions that have been advocated by various paramedical groups has no scientific foundation and should not be utilized. A firm stand against such therapy has been taken by the American Medical Association, the American Diabetes Association and the Endocrine Society.

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Editorial

PATIENTS WHO WANT YOU TO FAIL



WILLIAM B. McGRATH, M.D.

Some patients simply cannot afford to relinquish their symptoms or their apparent illnesses. To be mindful of this is to spare ourselves frustration, self-recrimination and the private humiliation of defeat.

How do we recognize those who have unconsciously fore-ordained such failure? There are several cardinal and interrelated clues.

1. History of childhood deprivation.

A person who has suffered the lack or interruption of parental care will bring that unfulfilled need into adult life. He will be disposed to demand of the physician, as surrogate parent, more exclusive and personal consideration than his case warrants and more than any physician could possibly provide. One cannot offer in 1975 a meal that will allay the hunger pangs of 1935 or 1945. The hunger is insatiable.

2. Disillusionment with previous doctors.

If a new patient spends most of the hour recounting his misunderstandings and disappointments with a series of competent colleagues, we may predict that we will be next on the lengthening list.

3. Primary need of a label.

Some patients express annoyed disinterest in treatment or prognosis or recovery. They will only be satisfied or save face with a socially acceptable pseudo-diagnosis, couched prefer-

ably in the double-term, esoteric language of science. "Chemical imbalance" or "hormone deficiency" or "metabolic disorder" will usually suffice, especially if undemonstrable. "Negative bio-feedback" is a lulu. If in general discussion one politely concedes such remote or meaningless possibility, the patient will relate it to others, not as a possibility, but as an established fact. Such patients pit one doctor's opinion against the other's, enjoining and enjoying the resultant friction.

4. Paradoxical reaction to medicine.

One should heed the warning of any patient who says that he is "allergic" to a wide variety of ordinary drugs. If he unconsciously intends to defeat you, then the simplest remedy or even a placebo will provoke distressing side-effects, such as dizziness and nausea and weakness. A prescription, you will remember, is an extension of the doctor who issued it. The pill is a talisman or fetish, a homunculus of whatever the doctor personifies in the patient's complicated mind.

5. Contentment with the least effectual physician.

A patient who needs his illness or disability will be passive and protective toward the doctor who plays the game with him, evading any diagnosis which could be substantiated, indefinitely prolonging worthless treatments. A physician in this kind of case actually rationalizes: "Well, at least I am keeping the patient out of the hands of the quacks!" As many doctors of medicine are culpable in this area as are chiropractors or osteopaths. Exploited insurance carriers keep a list of them. The patients themselves will prove quite hostile to any accurate and honest consultant.

6. Unhappiness.

Many people are entrapped in hopelessly unhappy life situations. Whether their illnesses are "organic" (or-always-both), they have little incentive to recover. Illness may be their only escape, and doctors and nurses are their only

source of comfort. Contrariwise, if the person should begin to feel better, if he should get sufficient strength and energy, he might revolt, breaking his social and moral code, defaulting his responsibilities, and seeking a chance to find happiness at the expense of others. Neurasthenia is the lock on the cage.

7. Duration of the problem.

You ask a patient how long he has had headaches or nervousness or digestive disorders. He or she replies, sometimes simpering, "All my life, Doctor," or "As long as I can remember." From the viewpoint of treatment and prognosis, we had as well have asked him how long he has had big feet or a swarthy complexion. If nothing heretofore has corrected a condition, we are not likely to do so, and the patient knows it.

8. The oversold specialist or remedy.

An appreciable number of patients seen for the first time in any office would obviously require more than a hundred hours for you to approach optimum results. This impossibility is deadening. Sometimes a well-meaning but hurried physician will "encourage" the patient: "You just go see Doctor A or Doctor B and level with him and he'll have you straightened out in no time." Or, promoters or popular medical writers or amateur teachers will have stirred the universal wish for magic and miracles. "Doctor, will you hypnotize me or use pentothal to make me lose weight or stop drinking or get over my inferiority complex?"

9. The doctor as scape-goat.

From the beginning of time the price of authority has been the risk of martyrdom. Our medical ancestors, the wizards and soothsayers, paid with their lives when their predictions were wrong or their magic didn't work. A new patient submits that she has been crying and shaking for months. On the same evening we get a challenging call from her husband: "Ever since my wife consulted you she has been crying and shaking." *Post hoc ergo propter hoc.*

Another patient is afraid to face an ominous accumulation of resentment toward her husband. She displaces it onto her beleaguered internist, taking it out on him. She accuses him of the cruel withholding of interest or care which she has experienced with her spouse. The marriage survives at the doctor's expense. Interestingly, she has nothing but fault to find with the internist but (of unacknowledged necessity) she persists in making regular and frequent appointments. Many a rich alcoholic has conveyed, in effect: "Mac, old buddy, I'll pay you any fee if you will quit drinking for me." The shift of burden is usually more subtle: "I'll quit this stupid drinking if you can tell me why I do it." So now it is my responsibility!

10. Illness as the lesser evil.

An hysterical woman, no longer our patient to be sure, had a minor thrombosis in the calf of her fat leg. We felt that her family doctor was overtreating the condition, uttering terribly foreboding prognosis, insisting that she stay off her feet indefinitely. She has become literally attached to her wheel-chair, and she would shoot anyone who tried to take it away from her. Until now she has had a most unrewarding marriage and her husband and adolescent offspring have ignored her or treated her with disdain. Today they are wheeling her through a shopping center and she is cheerful and her family feel for the first time protective, noble and self-sacrificing. The wheel-chair is the *deus ex machina*, and who would or should or could tamper with the denouement of this small drama?

The hysteric tries to personalize or eroticize every encounter. After the first interview we get a letter, addressing us by our first name, flattering us extravagantly and signed "with love." She may be trying by repetition to undo some stunting influence of a seductive father.

She wants and needs to fail in her campaign. If we avoid involvement on her terms, she will press harder a few times and then move along. If we do take the bait (and who hasn't at some time?) she will reel us in and devalue us and ridicule us to our successor.

The severe hypochondriac or the obsessive compulsive, reading from his carefully collected notes, will brook no interruption, tolerate no questioning. He clutches his phobias because they are ultimately wishes which he cannot face. In his imperative demand to control the interview, he is saying that he had rather have a fatal disease than some spiritual conflict which cannot be resolved.

The chain-smoker is destroying his lungs. The neoplasia is trying to repair or replace it. The cancer will live and the patient will die.

It might take the curse off this otherwise gloomy editorial if we remind ourselves that nature is trying always to warn our patients of impending calamity or protect them from it. Hyperventilation may be a lesser evil than divorce. Alcoholism or neurasthenia may not seem as harmful as adultery. To put it much too succinctly: a psychosomatic disorder is a defense against neurosis; neurosis is a defense against sociopathy or psychosis; psychosis is the final uncertain defense against murder or its incestuous cousin, suicide.

Associate Editor Notes:

1. You realize, of course, that analysis of resistance is the bit in the drill of formal psychotherapy.

2. Consideration of the knotty problems barely glimpsed in this article would vitiate and make a mockery of the bureaucratic milkman concept of the doctor as no more than "a deliverer of health care services."

WBM



*Department of
Health Services*

CRIPPLED CHILDREN'S SERVICES



JAMES L. SCHAMADAN, M.D.

"Any crippled child in need of care should have that care at the time it is needed." This philosophy, inherent in Arizona laws regarding public health services for the state's children, is the guiding principle of Crippled Children's Services, now a part of the Arizona Department of Health Services.

Crippled Children's Services began in Arizona in 1936, expanding and changing through the years to better meet the complex needs of the state's children. The program receives its operating funds from three sources: state funding (79 percent), federal monies (20 percent) and gifts (one percent). Approximately forty percent of the patients pay little or nothing for the service. Payment received for services is returned directly to the state's General Fund and not to the operating budget of the Crippled Children's Services.

Although concentrating on the treatment of scoliosis, cleft lip and palate, and congenital hip disorders, Crippled Children's Services accepts patients with many other conditions. Among these are poliomyelitis, osteomyelitis, cerebral palsy, cystic fibrosis, certain eye, ear and cardiovascular conditions, burn scars, clubfoot, and other disorders which, in the opinion of the medical staff, would lead to a crippling condition.

Anyone under 21 years of age who is a resident of the state is eligible for a free diagnostic examination at one of the several outpatient clinics operated by Crippled Children's Services. The patients may be referred by their parents, attending physicians, or otherwise brought to the attention of the medical staff by social work-

ers, school and public health nurses, or concerned citizens.

If a crippling disorder is found during this examination, application is made for treatment services. Payment for these services is made according to a sliding scale, as determined by the patient's ability to pay.

One outpatient clinic providing new patient screening and follow-up care is located on the first floor of the Arizona Children's Hospital in Tempe. Here the facilities are equipped to house clinics in 16 different specialities, each staffed by medical specialists from the Phoenix area. At this clinic, utilizing the team approach, pediatricians coordinate and monitor the care of each child in need of the specialty services, such as orthopedics, plastic surgery, psychology and pediatric neurology. Under the direction of Dr. Warren A. Colton, Jr., Medical Director of the Arizona Children's Hospital, the clinic offers an efficient appointment and scheduling system that helps to eliminate two of the more common complaints about public medical care — excessive waiting, and never being able to see the same doctor on successive visits. Another outpatient clinic located in Tucson, at 2916 East Broadway,



Thomas E. Roesner, M.D., orthopedic resident at the Arizona Children's Hospital, discusses progress with a young patient and her father.

also screens new patients and provides follow-up care.

In May, 1967, field clinics were started with the intent of bringing services to the children of other areas. The six original clinics have since grown in number to 102 regularly scheduled "traveling" clinics covering the state. Since its beginning, the number of patients served by the traveling clinic system has grown at the rate of 16 percent each year. In addition to serving communities such as Kingman, Safford and Winslow, the traveling clinics also benefit the Navajo, Apache, San Carlos and White River Indian reservations.

Appointments for free diagnostic examinations may be made by contacting any of the facilities of the Crippled Children's Services by letter, telephone or personal visit. Those in the Phoenix area may call the Children's Hospital at 244-9471, or write the Arizona Children's Hospital, 200 North Curry Road, Tempe, Arizona 85281. The Tucson number is 325-1571. A schedule of the traveling clinics is available from the Children's Hospital.



Dr. Roesner chats with a patient at one of the orthopedic clinics held at the Arizona Children's Hospital.



Topics Of Current Medical Interest



ARMP – ARIZONA'S PHOENIX-BIRD OF HEALTH

D. W. Melick, M.D., has been coordinator of the Arizona Regional Medical Program since it was organized in 1967. He holds an appointment as professor of surgery in the College of Medicine, University of Arizona. Previous to joining the College he practiced the specialty of thoracic surgery in Phoenix, Arizona. He is a past president of both the Maricopa County Medical Society (1951) and the Arizona Medical Association (1959).

Paul D. Ward, the "grandfather" of Regional Medical Programs, recently referred to the history of RMPs as a "curious odyssey."* A founder of RMPs in 1965, Mr. Ward points out that wide-swinging changes in federal policy over the past eight years have kept RMPs on a spectacular roller coaster ride through a wind tunnel where the wind changes direction every few minutes.

Indeed, "curious odyssey" may well define RMPs, even as their continuing contributions to medical history are being analyzed and catalogued. But closer to home, the Arizona Regional Medical Program during 1974 more accurately resembled the legendary phoenix bird consumed by fire to rise again from its own ashes. The rise, not the ashes, is important to Arizona medicine, and at least a brief synopsis of the great conflagration is in order.

Just a year ago, RMPs across the country faced exclusion from the President's budget, followed by a June 1973 phase-out. Instructions were given to terminate staff and project support, albeit without Congressional authority to do so. This was followed by exhaustive hearings in Congress from which came passage of extension legislation approved 372-1 in the House and 94-0 in the Senate. This unanimity reflects the

highly measurable contributions made by RMPs during the preceding years. Subsequently, last February a Federal District Court in Washington, D.C., ordered the release of \$126 million in impounded funds to RMPs and simultaneously ordered that RMPs be permitted to proceed unhindered, with no termination date unless Congress so indicates. As a result, RMPs are now funded through June 30, 1975.

What the future holds for RMPs is yet to be decided. As of this writing, a controversial omnibus health bill, HR 16204, having far-reaching impact on many health programs including RMPs, is expected to reach floor debate before December adjournment. Should this bill not pass, then new health planning legislation would be considered by the next Congress in 1975. During the interim, RMPs can optimistically expect extension legislation and appropriations, although at a reduced level of funding, to carry through to July 1, 1976.

The actions giving new life to vital RMP efforts came while federally-ordered staff terminations were decimating Arizona's RMP services. For those of us long identified with ARMP it is gratifying to see new and revitalized programs emerge from the ashes. Although our

*Western Journal of Medicine, pp. 425-429, May 1974.

requests for federal funding this year were reduced 35 percent, we nonetheless received \$1,795,508 in total federal funding for Arizona for the 18-month period from January 1, 1974 to June 30, 1975. With these funds we retained a number of key programs and introduced critically needed new ones. Major emphasis continues to be on the medically-underserved areas of our state.

With the release of funds in February we began the task of rebuilding our staff to a level capable of providing professional and technical assistance. I am especially pleased at the progress which our staff, working with community groups across the state, has achieved in the face of the uncertainties and financial restrictions which beset us a few short months ago.

So, with that as a synoptic background, I would like to briefly describe the major areas of progress during 1974. First, for those not acquainted with ARMP, let me explain that we are one of 53 Regional Medical Programs administering federal funds to provide major assistance in developing needed local health services. Out of many federally-funded health projects in this nation, RMPs are one of the most locally autonomous, grass-roots programs of all. In Arizona the RMP is a division of the University of Arizona College of Medicine, working with a wide range of health and health-related groups and institutions in Arizona. Both professional assistance and limited financial support in grants and contracts are available to private, non-profit organizations, government organizations, or both, working in ARMP priority areas.

We are guided by a Regional Advisory Group which formulates program policies, goals and priorities. During the year, Dr. George E. Bock was elected chairman, succeeding Dr. Richard O. Flynn of Tempe, who for so long capably and effectively served in that capacity. Dr. Flynn continues as an advisory group member. Dr. Bock, a charter RAG member and a former internist in private practice, is now director of professional affairs for the Indian Health Service in Phoenix. The RAG represents various community interests and professions, including strong representation from the medical profession.

During 1974, our carefully selected team of health systems specialists was especially concerned with the quality of Arizona's rural health delivery system. A prime example has been the

emphasis on medically-underserved areas, where we are working with local communities to establish new health sites, attract medical manpower, train paramedical and nursing personnel for more health responsibilities, and establish control programs for various diseases. Like all ARMP programs, these are designed for community continuation after modest ARMP seed money has helped attract sufficient financial support from other sources.

Of vital importance to ARMP programs has been the support and participation by physicians across the state. They have been instrumental in pinpointing not only areas of need for their communities, but in helping reach solutions.

Some indication of the extensive contributions made by the nation's RMPs as a whole can be found in a new, evaluative study conducted by the Public Accountability Report Group (PAR). This 1974 survey of the nation's 53 RMPs reveals that, for example: 9 million people received direct health care services in RMP activities in 1973; 12 million additional persons benefited as a direct result of the use of new skills acquired by local health professionals in RMP training programs; and RMPs provided major technical assistance in over 6,000 instances in creating new health services organizations and in securing over \$350 million of non-RMP funds.

Our office has available a limited number of these reports. They are free upon request to Arizona Regional Medical Program, 5725 East Fifth Street, Tucson, Arizona 85711.

Also, in order to acquaint community leaders with ARMP activities, we now prepare a weekly HEALTHGRAM newsletter. Any reader interested in being added to our mailing list may write to the same address.

A brief overview of ARMP specific activities during 1974 will, I hope, provide some measure of additional insight into the meaningful programs that serve to reinforce and improve the health delivery systems in Arizona. Notwithstanding the "curious odyssey" travails, Arizona's Regional Medical Program remains dedicated to improving the availability of quality health care on a more uniform basis to all Arizonans.

Briefly, our major activities in 1974 included:

Expansion of Health Services Sites. New health services sites were being developed to

bring primary health services closer to residents of medically-underserved areas. ARMP's goal is to have health services networks established and serving 14 medically-underserved communities by June 1975. The first five community programs already under way will serve as examples for other communities.

Extension of Medical Manpower to Underserved Areas. ARMP allocated funds to the Arizona Medical Association to support a statewide medical manpower recruitment effort, and assigned professional staff to assist in bringing communities and professionals together. Working through local committees, ARMP is helping recruit physicians, physician's assistants and nurse practitioners to serve medically-deprived areas. The goal is to place eight or more health professionals in areas of critical need by June 1975. To date, two have been placed and considerable interest expressed by others to locate in these areas.

Self-Provider Health Education. An extensive health information system was being developed to include: telephone access for Metro Phoenix residents to information on 50 health subjects in English and/or Spanish; two similar systems in non-metropolitan areas; technical assistance from ARMP to communities interested in offering self-provider education courses to residents; and training of at least 100 residents in medical self-care for assistance in medically-underserved areas. Toward this goal, ARMP is funding personnel, audio-visual materials and other equipment and developing training course content.

Community Hypertension Control. More than 60,000 Phoenix and Tucson residents were screened for high blood pressure in screening centers and, where indicated, referred for treatment. The Arizona Affiliate, American Heart Association, is the lead agency for more than 20 statewide health organizations. It is anticipated that the program will reach 200,000 people by June 1975 and will be expanded statewide to at least 12 non-metropolitan communities.

Emergency Medical Services. ARMP assisted in developing critically-needed EMS public access systems. The first demonstration system is now being developed in southern Yuma County. ARMP is working with local EMS councils to design and install communications facilities, distribute public education materials, train technicians and other residents. Ultimate goal is a statewide program for EMS with

financial, technical and educational aid from ARMP.

Streptococcal Control. A community-wide demonstration program to prevent sequelae of streptococcal infection through screening and follow-up treatment was approved for Santa Cruz County. Special focus is on 5,500 school-children and their families. Earlier programs using ARMP funds have had dramatic results on the Navajo and Papago Reservations.

Development of Arizona Health Information System. The objective of this vital program: to provide an integrated statewide information system that accurately reflects the ongoing status of health and health resources in Arizona. Such a program will fulfill the need for state and community planning, implementing and evaluating of health services. The system will combine available computer facilities with necessary professional and technical assistance.

Continuing Education. This program made possible continuing health sciences education for health professionals in their local communities, improving the quantity and quality of health manpower throughout the state. Responsibility for this long-range program has now been assumed by the Office of the Vice President for Health Sciences, University of Arizona, with funding participation by ARMP for FY 1975.

Pilot Arthritis Program. This new ARMP-funded program began developing a network of diagnostic, treatment and rehabilitation services for arthritis patients and their families, expanding those services to medically-underserved areas of Tucson and rural communities of Southern Arizona. The Southwest Chapter, Arthritis Foundation, is the lead agency for the pilot project, supported by other public and private arthritis-related health agencies.

Family Nurse Practitioner Program. ARMP funding helped establish a program to train Registered Nurses to function as Family Nurse Practitioners, providing primary health services in medically-underserved areas. Through ARMP and the Colleges of Medicine and Nursing at the University of Arizona, training has been provided for the first 12 practitioners who recently completed six months of classwork plus six months of preceptorships. A second class began training in October. Funding for the next three years has been assured by the U.S. Public Health Service Division of Nursing.

ANARCHISM REVISITED

ROBERT E. T. STARK, M.D.

Chairman, Medical Education Committee

Over the years of perusing Arizona Medicine I have looked forward to reading Dr. William B. McGrath's editorials. It is not only that he does not restrict himself to medical topics or medical politics; he addresses himself with a background of over twenty-five years as a practicing psychiatrist to the whole range of human behavior. He writes about mundane matters and the eternal verities and he does it with wit, charm and style. As befitting a writer with strong opinions, he comes down hard on bureaucratic bungling and third party nonsense. On occasion medical institutions and organizations are critically assessed. Such was the case in the October 1974 editorial, "Anarchism."

The first two-thirds of the editorial have to do with an essay on truth, third party annoyances and interpersonal communications. After these matters were settled came the surprising switch to organized medicine's involvement in physician certification, assessment of competence and continuing medical education. Quite a switch this way, both literally and figuratively.

Dr. McGrath champions the physician's right to privacy in matters concerning his practice and competence. For example, "Unless there are some grounds on which to bring your competency into question, no one has any right to question it." Try that on your hospital's utilization, peer review or medical audit committees.

Almost every national medical specialty society is examining methods of assessment of competence and has either conducted or is thinking of conducting self-assessment exams. In the AMA's September 1974 Continuing Medical Education newsletter there is a discussion of recent policy statements formulated by one specialty group's representatives. The officers of the American Academy of Orthopedic Surgeons and the American Board of Orthopedic Surgery concurred that:

- a) A physician has the obligation to prove or improve his competence;
- b) The method of proving competence must be pragmatic and relate to the physician's type of practice;
- c) Documentation of CME is urgent and must be implemented now.

The Joint Commission on the Accreditation of Hospitals recently recommended to an Arizona hospital medical staff that it document its members' participation in continuing medical education programs both in and outside the hospital. J.C.A.H. recommendations to one medical staff have a way of becoming requirements for all medical staffs.

Like an expert marksman Dr. McGrath targets in on those physicians who, presumably under compulsion by their specialty society or state medical association's CME requirement, sign in at a medical meeting and then skip out. I recently attended the annual scientific assembly of the American Academy of Family Physicians. There were over 5,000 registrants. Some attended because of the Academy's educational requirements; most came to learn. It strains the bonds of credulity to suppose that any significant number of physicians would travel to Los Angeles from all over the country just to sign the attendance roster.

The editorial contrasts, somewhat unfavorably the medical profession with other professions and trades which have avoided the pitfalls of certification. It points out that a lawyer who wishes to specialize does so by qualifying himself and establishing his reputation. I suggest that certification rather than a weakness constitutes one of medicine's strengths and contributes to the overall esteem, recently reratified, in which the medical profession is held by society.

Dr. McGrath sums up his critique and his stand for individual liberty with an appeal to history. "Like Luther, I will nail this proclamation to the door of the establishment: I HAVE NO BOSS AND I AM TIRED OF HAVING TO SAY SO." Luther nailed his theses to the door of Wittenburg Church in 1517. In 1417 London's medical guilds were regulating professional conduct and supervising medical practice. The historical process of physician regulation by his professional societies will undoubtedly continue. Is this Anarchism? More likely it is Salvation.

REGIONAL CONTINUING EDUCATION

The American Medical Association, in its continual change and growth, has established a new Regional Postgraduate Medical Education Program for 1975.

Sponsored by the Council on Scientific Assembly, the regional meetings will allow the physician a convenient opportunity to add to his knowledge and to accumulate continuing medical education credits.

One of these regional meetings will be in Phoenix, Ariz., March 15-16, 1975, at the Westward Ho Hotel and the Phoenix Convention Center. The two-day Saturday and Sunday program will offer eight postgraduate courses. Each course will carry six hours of Category I credit toward the AMA's Physician's Recognition Award. The total cost for breakfast, lunch, and one six-hour course is \$70. Some faculty will be drawn from the University of Arizona College of Medicine; other professors will come from out-of-town medical schools. Registration fees will be collected by the AMA, which will also bear the cost of planning and operating the meeting.

The University of Arizona College of Medicine and the Arizona Medical Association, Inc., have been invited to serve as co-sponsors and their advice has been solicited. The Council on Scientific Assembly and its staff are working in cooperation with Bruce Robinson, executive director of the Arizona Medical Association, Inc.

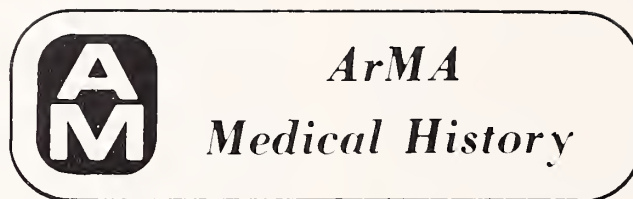
For 1975 three other areas have been selected for regional meetings because of their physician population, ease of transportation access, and potential need for continuing medical education programs. Tampa, Fla., Feb. 8-9; Minneapolis, Minn., July 26-27; and Williamsburg, Va., Sept. 27-28. Food, lodging, and course fee "packages" will be offered for each meeting.

The following courses will be offered: Basic and Advanced Life Support-Cardiopulmonary Resuscitation, Dermatology for Nondermatologists, Human Sexuality, Basic Electrocardiography, Venereal Disease, Fluid and Electrolyte Balance, Infectious Diseases and Antibiotics, and Pulmonary Function and Blood Gases. Each registrant will be provided with a course syllabus.

These courses offer six hours of Category I credit; the course titled Basic and Advanced Life Support offers 12 hours of Category I credit toward the Physician's Recognition Award. The award was initiated by the AMA to encourage physicians to participate in certified continuing medical education programs. The sponsor of the regional programs, the Council on Scientific Assembly, has been accredited by the AMA Council on Medical Education, which helps to set the standards for high quality medical education.

For information on any of the courses, write to the Department of Scientific Assembly, American Medical Association, 535 N. Dearborn St., Chicago, Ill. 60610.

The regional postgraduate meetings represent an expansion of the program of continuing medical education as conceived and developed by the Council on Scientific Assembly. The Council is the AMA's principal programming firm in continuing medical education, an outgrowth of its traditional responsibility for programming the scientific and educational portions of the AMA Annual and Clinical Conventions. Because of the success of expanded postgraduate course programs at the conventions, and the concomitant demonstration of a need for more such programs, the Council decided to expand them through regionalization.



ARIZONA MENTAL HEALTH IN TERRITORIAL DAYS PART II

DRY GULCH JAKE

Editor's Note: The Territorial Assembly authorized the sale of \$100,000.00 in bonds to build the "asylum" in Phoenix. Also stipulated that the land and building costs were to be limited to \$75,000 and not less than 80 acres of land included!

Someone should search out the true acreage acquired; superficial inquiry suggests 160 acres with 40 acres late acquired. In the late 60's Brigham Young University bought 40 acres for \$1,550,000.00 to build a university. In 1972 sold it back to the Etate of Arizona for \$2,267,250.00. So for an initial investment of slightly less than \$100,000.00 and most of that for a poorly constructed building, the steady march of the inflation of land value — seems almost incredible.

1885 — 13th ASSEMBLY

"Though variously known as the 'Bloody Thirteenth' or the 'Thieving Thirteenth' because of its extravagant expenditures this legislature inaugurated and parceled out several institutions that are still a credit to Arizona. When the shouting was over and the smoke-filled rooms were aired out, the capital was still at Prescott and the prison at Yuma. Phoenix captured the coveted insane asylum with an appropriation of \$100,000, though critics argued that it would have been cheaper to continue sending patients to Stockton, California, where a charge of six dollars per week each was made for their care. Tempe was given the teacher's college and an appropriation of \$5,000. Tucson had to be content with the university and a \$25,000 grant, or one-fourth of the amount provided for the asylum. Other spoils were also voted to placate different sections of the territory. Yuma was promised a new levee along the Colorado, and Florence receive a \$12,000 bridge over the Gila. The latter project turned out to be a complete waste of money since the then water-filled river went on one of its famous rampages and cut a new channel, leaving the bridge 'high and dry' in the desert."^a

History, University of Arizona Press, 1970. Pages 208-209.
^aWagoner, J. J. ARIZONA TERRITORY 1863-1912, A Political

(Gov. Tritle didn't ask for it, but this legislature passed the following bill to establish the Insane Asylum of Arizona.)

No. 58 AN ACT

To establish, maintain and provide for the Government of an insane Asylum. Be it enacted by the Legislative Assembly of the Territory of Arizona:

Section 1. There shall be established within and for the Territory of Arizona an asylum for the insane, which shall be known by the name of the Insane Asylum of Arizona, and all buildings used therefor shall be erected upon the lands to be hereafter obtained by the Directors hereinafter provided for, at or near the City of Phoenix, in the County of Maricopa, Territory of Arizona, and said insane asylum shall be constructed by and be, and remain under the control of said Directors of said Asylum, to be hereafter appointed in accordance with the provisions of this Act; Provided, however, that said County of Maricopa, or said City of Phoenix or some private person or persons, on or before the 1st day of January, 1886, shall first have conveyed, or cause to be conveyed to the said Board of Directors, as hereinafter provided for their successors in office, for the use and benefit of the Territory of Arizona and for said Asylum, not less than eighty acres of land, with sufficient water to irrigate the same, available for the purposes of such Asylum, and free from all incumbrances; and, if such land be not so donated on or before the 1st day of January, 1886, this Act shall be void of no further force or effect.

. . . Sec. 4. The said Board of Directors shall have full power and authority to manage the affairs of the said asylum. Said Board shall as soon as practicable receive not less than eighty acres, as heretofore provided, for the use of said asylum at or near the City of Phoenix, County of Maricopa, Territory of Arizona, and cause a draft of plans and specifications of such buildings, as said Board shall deem necessary and proper to be erected for the use of said asylum, on said lands to be prepared, and to advertise for and receive sealed proposals for the furnishing the necessary material and for the erection of such buildings, and the contract shall be given to the lowest responsible bidder; provided, that the cost shall not exceed, when completed, the sum of seventy-five thousand

dollars, including the purchase price of said lands, which shall have been purchased by said Board, and all furniture and improvements necessary for use of said asylum . . .

. . . Sec. 21. The resident physician, who shall also be the superintendent, shall be the chief executive officer of the Asylum; he shall have the general superintendence of the buildings, grounds, and property, and the direction and control of all persons therein, subject to the laws and regulations established by the said Board of Directors; he shall daily ascertain the condition of the patients and prescribe their treatment; he shall appoint, with the approval of said Board, so many assistants and attendants as he may think proper and necessary for the economical and efficient performance of the business for the Asylum, prescribe their several duties and places, fix, with the approval of said Board, their compensation, and discharge any of them at his sole direction; but in every case of discharge he shall forthwith record the same with the reasons, under an appropriate head, in one of the books of the Asylum; . . .

The management of the asylum obviously had come upon a good thing. At last the Territory had its own asylum but it was unusable. The patients were still in Stockton.

1887 – 14th ASSEMBLY

Message from Governor C. Meyer Zulick:

“The last Legislature passed ‘an act to establish, maintain and provide for the government of the Insane Asylum in the Territory of Arizona.’

By its provisions a Board of Directors composed of three members, viz: Oscar Lincoln, Madison W. Stewart and Frank C. Hatch, who were nominated by ex-Governor Tritle and duly confirmed, assumed the powers delegated to them. Section 25 of the act provides to an honorary Board of Directors, whose duty it is to inspect said asylum, to investigate the books, accounts and goings of the Board of Directors and of all officers of said asylum, and to make a report thereof, together with such suggestions as they may deem proper, to the Governor.

The honorary Board of Directors met at Prescott April 22, 1886, at 10:30 A.M. at the office of the Governor; due notice having been given each of the Directors, and the Secretary and Treasurer of their offices. Director Stewart did



INSANE ASYLUM IN THE TERRITORY OF ARIZONA

not attend. Directors Lincoln and Hatch were present, but had directed, as they admitted, their Secretary and Treasurer to refuse to be present with the minutes, books, papers, etc. It was under these adverse circumstances that the honorary Board attempted the discharge of their duties. Questions were propounded to Directors Lincoln and Hatch, some of which they answered and many of which they declined to answer. Sufficient information, however, was gathered to establish such facts as warranted a report of the honorary Board to the Governor that Messrs. Lincoln, Stewart, and Hatch 'had been guilty of neglect of duty and official misconduct, and that by openly violating the law under which they were created, and by extravagantly disbursing, carelessly guarding, and reckless jeopardizing the security of the public money under their control,' made it their duty to recommend, as they did, their removal from office.

A full copy of this report, accompanied with the testimony and exhibits, the proceedings on hearing before me, and the executive order of removal is submitted for your consideration. At the time these officials were removed, in conformity with statutory provisions, the balance sheet of William Christy, Treasurer, showed a

balance on hand of \$63,441.50. They refused to recognize the executive order of removal and declined to surrender the building, books, papers or money in their hands to their legally constituted successors, who were regularly appointed to fill the vacancies occasioned by their removal, thereby compelling their successors to resort to the courts for relief from their usurpations of office.

A competent court in September declared them "usurpers of office," and rendered judgment of ouster, from which they appealed, and which appeal and which appeal has been dismissed. Demands were again made on them and their officers for the surrender of the books, papers and property of the Territory under their control, which were denied. Writs of mandate were applied for, and on the 23rd of November, 1886, after a writ had been served on Oscar Lincoln and Madison W. Stewart, and after they had expended all the money in their hand except \$7,000, which was paid into the Territorial Treasury, the asylum building, books, papers, etc., were turned over by them to the new Board, who on the 6th day of December, ultimo, appointed experts to examine the building, plumbing, gas-fitting, roofing, furniture, bedding, books and accounts. The report

of the new Board and the reports of their experts are herewith submitted.

By reference to the accompanying reports of the honorary Board and the Board of Asylum Directors, it will be seen that Messrs. Lincoln, Hatch and Stewart constituting the old Board of Asylum Directors, sold the bonds of the Territory appropriated for the construction of the asylum, \$10,000, at 95 cents, less three months interest; and \$90,000 to their own Treasurer at 95 cents, less three months interest and one per cent commission; realizing for the first ten bonds 93¼ per cent, and for ninety bonds 92¼ per cent, when the law forbid them to be sold for less than 95 per cent of their face value. That all the bonds were sold at private sale, when the law required they should be sold after advertisement to the highest bidder. It is asserted that the bulk of these bonds were resold for the account of William Christy in New York in March last, at par and accrued interest, which was the price offered the Board for the entire issue, provided they would wait until Congress approved the law.

The reports will also show that after adopting plans and specifications, the old Board concluded a contract with Carl, Crowley & Abernathy, the lowest bidders for the erection of a building in accordance therewith for the sum of \$42,999, and that without authority of law they subsequently made additional contracts with these parties, which increased the cost of building to \$70,100.92. A noted architect at Phoenix certifies that \$8,500 would have been a liberal price for the work done under these additional contracts. The reports of the experts who examined the building, show that its construction was not in accordance with plans and specifications adopted, but that the mason, carpenter and plumbing work was all done in a slipshod manner, and the material used was in every instance of the cheapest and poorest quality. So that now the Territory has a building which will require repairs amounting to \$2,500 before it can be of permanent use. That on account of its faulty construction it can never be made such a building as the people had a right to expect for the money expended upon it. The building and grounds are in a state of incompleteness which will require the expenditure of several thousand dollars to make it suitable for the accommodation of the insane of the Terri-

tory. It will be seen that whereas the law limited the compensation of the local Director to \$500, and non-resident Directors to \$1,000 each during the year or portion of the same engaged in the construction of the buildings, Oscar Lincoln drew from the fund \$1,831, M. W. Stewart \$1,491.40, and F. C. Hatch, the resident Director, \$2,285.53. It is also shown that furniture was placed in the building at a cost of \$3,999.90, which competent experts appraise at \$2,806.75.

The law limited the cost of the Asylum, including buildings, grounds, furniture and all things necessary to make it a suitable receptacle for the insane, to \$75,000; the Board expended \$88,575, and it will require large additional sums to make it what the law contemplated.

The disgraceful history of the entire transaction is a record of jobbery in wanton disregard of official propriety, decency and honor.

... Owing to the action of these recalcitrant officials, the Territory has been subjected to the expense of keeping the insane patients at Stockton for several months after the asylum should have been in successful operation at Phoenix. By their contumacious conduct in resisting executive and legal authority to remove them, they have proven an extravagant luxury to the taxpayers of Arizona.

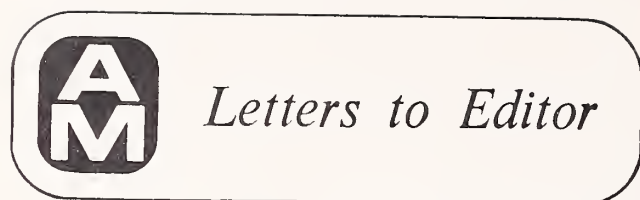
The patients were brought back to the Territory and the Asylum was finally functioning well, under the guidance of Dr. I. S. Titus.
1889 — 15th ASSEMBLY

Message from Governor C. Meyer Zulick:

... The administration of the Insane Asylum, under the direction of the present Board of Commissioners and Dr. I. S. Titus, the Medical Superintendent, is most efficient and praiseworthy, the expenses of maintaining the institution being \$4,754.42 less than last year. I desire to especially direct your attention to the necessary repairs of the Insane Asylum Building, the importance of a good system of sewerage and more perfect method of lighting, greater precaution against fire, and the fencing of the grounds as recommended by the Board, and for which a suitable appropriation should be made.

Reprinted with permission of the Palo Verde Foundation for Mental Health from Arizona Psychiatry, "Arizona Mental Health in Territorial Days and After," Part II, Vol. 1, No. 2, August 1970, pg. 15.

19 October 1974



21 October 1974

John R. Green, M.D.
Editor-in-Chief
Arizona Medicine
810 West Bethany Home Road
Phoenix, Arizona 85013

Dear Dr. Green

Enjoyed your editorializing in the last issue of Arizona Medicine concerning chiropractic and acupuncture. I agree with you that acupuncture "ain't all it's cracked up to be." As you are aware, there are certain physiologic effects of sticking needles into people that can be measured, but whether these physiologic variations can alter pathologic states is an enigma. My experience has been in contrast to yours — I have observed patients with intractable pain problems bettered by acupuncture. However, my observation has been that the more psychosomatic the pain complaint, the better the result. For example, chronic tension headaches and migraine often respond well to acupuncture, whereas the post-laminectomy back patient with chronic adhesive arachnoiditis is usually not helped. Having been involved in one of the few (if not the only) acupuncture in the State, I believe we had a powerful hypnotic element.

To summarize, acupuncture in my opinion is the safest and one of the most potent placebos we have even run into. Since 40% of pain problems will respond to placebo, this brings up a real ethical question. We all use placebos in medicine — should we dispense with this particular one?

Sincerely,
Burnell R. Brown, Jr., M.D., Ph.D.
Professor and Head
Department of Anesthesiology
University of Arizona
College of Medicine
Tucson, Arizona 85724

Editor

Arizona Medicine
810 W. Bethany Home Road
Phoenix, Arizona 85013

Dear Sir,

After reading your article titled "Medicine, Chiropractic and Acupuncture" in this month's issue of your journal, I am tempted to reply.

The subject of chiropractic was well dealt with by the late H. L. Mencken, whom I should like to quote: "If a man, being ill of a pus appendix, resorts to a shaved and humiliated longshoreman to have it disposed of, and submits willingly to a treatment involving balancing him on McBurney's spot and playing on his vertebrae as on a concertina, then I am willing, for one, to believe that he is badly wanted in Heaven."

In other words, patients have a right to choose who will treat them. We of the medical profession have always sought to protect this right.

If we, by any means, seek to keep chiropractors and acupuncturists and other quacks out of the medical marketplace, then we are practicing Big Brotherism.

Sincerely,
Howard Hyde, M. D.

October 24, 1974

Gentlemen:

In 1969 at 9 a.m. within a week of each other. I saw two eighteen year old girls in the Emergency Room at Southside Hospital in Mesa. They had been bitten on the right shoulder by a Brown Recluse Spider. I estimate that the bite had taken place about four to six hours prior to treatment.

The spiders were found dead in bed. The identity of the spider was confirmed by the Zoology Department of Arizona State University.

The bites were treated by the injection of 3cc of plain Zyllocaine in the area of the bite. Following which the areas were injected with 100 mgs. of Solu-Cortef. The areas were checked a week later (in each patient) and showed no induration, and no scarring. This information is being sent to you because others may see these spider bits and would like to try this method.

Sincerely,
George C. Truman, M.D.

ANNOUNCEMENT

DIAL-A-TAPE, the telephone dial-access information system for Arizona health professionals will suspend operation the end of December, 1974. Experience gained during this demonstration, designed as a taped medical information service and based at the Arizona Medical Center Library, will be utilized as future activities are considered for Continuing Education programs among health professionals.

ERRATUM

We apologize to George Lastnick, M.D., F.A.A.F.P., for incorrectly listing his title as F.A.C.P. on page 826, Vol. 31, No. 11, 1974 **ARIZONA MEDICINE**.



In Memoriam



ArMA Reports

THE MINUTES APPEARING IN THIS SECTION HAVE BEEN EDITED TO CONSERVE SPACE. A COMPLETE COPY OF THE MINUTES OF ANY MEETING WILL BE MAILED TO ANY MEMBER REQUESTING THEM.

GASKINS, M.D., DUKE R. 1897—1974

GERLICH, M.D., NORMAN A. 1914—1974

JOHNSON, M.D., RONALD G. 1929—1974

MALLOW, M.D., HARRY G.E. 1908—1974

STEFFENS, M.D., HENRY J. D. 1919—1974

VICTOR, M.D., DONALD H. 1912—1974

MEDICAL EDUCATION COMMITTEE

The meeting of the Medical Education Committee of the Arizona Medical Association, Inc., held at 810 West Bethany Home Road, Phoenix, Arizona on Monday, September 30, 1974, a quorum being present, convened at 7:35 p.m., Robert E. T. Stark, M.D., Chairman, presiding.

MINUTES

The minutes of meeting held August 6, 1974 were approved as distributed.

AMERICAN INDIAN SCHOOL OF MEDICINE

It was anticipated that Taylor McKenzie, M.D., Executive Director, Navajo Health Authority, and Dean, American Indian School of Medicine, would be present to give a presentation on the status of the School. Doctor McKenzie did provide the Committee with the "Statement of Philosophy of American Indian Medical Education," as follows, with his acceptance to attend the meeting.

"The new American Indian Medical School will provide an opportunity for Indian youth to complete all of their education within their own environment. The present plans will enable Navajo

and other American Indian youth an Indian environment within which they can obtain medical and other health professions education.

The American Indian Medical School will strengthen and broaden the needed science and allied health education in existing undergraduate colleges. The school will help educate the needed large number of nurses, medical technologists, medical record keepers, home health aids, and other doctors' assistants.

The medical school will provide the leadership in educating the several health professions to work together as a team to prevent illness, to promote health behavior and to care for the sick.

The curriculum will be developed to train family practitioners with special emphasis on current unmet health needs of Indians. This focus should continue in perpetuity as old needs disappear new unmet needs can be identified, investigated and conquered.

The curriculum will take cognizance of traditional health practices, with particular emphasis on supplementary and complementing them for the patients benefit.

This approach recognizes several critical factors or criteria for continuing success. They include a recognition and appropriate utilization of that which is good in traditional knowledge: a means of preserving the best features of a culture; and reinforcement of personal identity.

The curriculum will utilize modern methods which have been developed, tested and found most valuable in assisting students. These methods include computer aided instruction, the use of models, audio visual aids, and the use of the National Library of Medicine network for reading materials.

The admissions process, the curriculum and the sites for clinical education will all encourage the graduates to serve Indian health needs.

Implementation of American Indian Medical School Philosophy

There is a primary need for an opportunity to obtain all of one's education within the home area, so that a disruptive period, away from family and friends is not required. To provide this purpose for Navajo youth, the Navajo Nation is establishing the American Indian Medical School. If desired later by other tribes, and as is possible within practical terms, the same principles will facilitate expansion of this important education to other facilities in other Indian lands. In the meantime, and in the future, students from other tribes will be welcomed into the facilities of the Navajo.

The type of medical education, and the closely related education of other numbers of the health care teams must be carried out as economically and effectually as possible. Furthermore the content and focus of these curricula must be addressed to the needs of the Navajo and other Native Americans. To accomplish these needs the preclinical education (including Anatomy, Biochemistry, Physiology, Microbiology, Pharmacology and such others as Genetics, Statistics and the use of computers)

will take place in as close physical proximity as possible to, and where possible, as a part of, the existing undergraduate colleges, including the Navajo Community College and College of Ganado.

The joining of the preclinical health professions and the colleges will hasten the development of the medical school, establish the needed training programs to educate the nurses, medical technologists, medical record, X-ray and cytology technicians, and the home health aids and other allied workers who are needed in great numbers to work with the doctors. These students will be taught together to work together to maintain health and care for the sick.

Clinical education for medical students and for nursing and allied health students will begin in existing facilities in order to speed up the start of the medical school, to improve and broaden the care, to train the doctors and others to work as a team, and to economically accomplish these goals. The clinical facilities initially used will include Shiprock, Tuba City, Fort Defiance, and Ganado, and in the early expansion those of Chinle, Gallup and other hospitals will be required. These sites will provide direct contact with the patients problems to be studied and corrected. The curriculum will emphasize preparation for current unmet needs of native Americans, such as diseases of the ear, infections and nutritional problems. The use of computers will be taught early, so that they can be used in education and for record keeping and in preventative measures. It is understood that the Navajo and all other American Indians constitute a small enough population so that computerized records could now be maintained on all.

The education at these clinical sites will be under the direction of faculty, residents and interns.

Additional facilities will be needed, perhaps even before the first class is enrolled. Therefore, the Dean must immediately establish the detailed aspects of preclinical education which can be taught in existing facilities in the existing colleges, and thereby make known what must be added. The budget for the needed additions as well as projected operating budget must then be established.

Similarly there are needed additional facilities for clinical education. These too, will need to be defined, budgeted and planned. Additional immediate definition of the housing needs must be carried out, and housing development scheduled at the sites of preclinical and clinical education. This is an important event to accomplish before the school can open. Requests for funds must then be developed to permit the opening and completion of the school.

The American Indian Medical School will provide educational opportunities for Indian youth and result in better care for the people."

Daniel B. Carroll, M.D. indicated a strong concern in the developing American Indian School of Medicine and has requested the opinion of two anonymous physicians who are respected in the medical education field. The two letters are as follows:

"Dear Dan: With regard to the Medical School, I very strongly feel that this is a very absurd idea. It was one thing to dare greatly and build a Junior College which someday will grow into a University, but is certainly another thing, which I take ill-advised action, at attempting something that is ridiculous. I am most disappointed in medical people who have led the Tribe along in their efforts to acquire a medical school. I can't conceive of a reputable person in the field of medicine of leading the Tribe to believe that a medical school is feasible or even possible within the boundaries of the Navajo Reservation. I was involved in a very small way with the discussion at Arizona State University as a site for a medical school and I know only too well the kinds of requirements necessary to have a successful medical school.

I have said this to Tribal leaders, and I have written this to Tribal leaders, and I have said this to our Board of Regents, but no one seems to be willing to listen to anything negative about their pet idea. I feel it is certainly one thing to develop a medical services training center which can train LPN's and RN's, etc., but it is entirely another thing to develop a real medical school. I think people who continue to mislead and offer false hope to the Tribe with regard to this medical school are in the long run doing them a tremendous disservice. Keeping a Junior College in operation is taking all of the abilities and even this is perhaps beyond the abilities of many Navajos and to think that they would place a milestone around their necks in terms of the cost of a medical school is totally and utterly absurd.

These are, of course, my personal opinions and are not shared by many others."

"Dear Dan: The information which you sent to me concerning a medical school to be sponsored by the Navajo Health Authority came as a complete surprise, and yet I find they have already appointed a dean of the proposed school. As you probably know, the Navajo Health Authority held a meeting at the Harvard Club in New York City on August 20 to publicly announce the proposed school and meet the new dean. Obviously there is serious enthusiasm from somewhere pushing the development of the school.

The questions which you have asked me about the proposed school are easy or difficult to answer depending upon the context in which that answer is framed. If one frames the answer in the context of present day medical schools, then it is virtually impossible for such a school to be established and operated given the physical and demographical details of the Navajo Nation which you outlined in your letter.

If on the other hand one answers the questions from the framework of doing everything possible to provide health care to the Navajo Nation and other Indians by Indian physicians and other health care personnel, I believe it is possible that the answer might be yes. My reasons are as follows:

1. Today there is a great deal of awareness of minority groups and disadvantaged groups —

perhaps especially the American Indians. This awareness and concern includes individuals and philanthropic organizations with considerable wealth and a considerable number of physicians. The first group might supply more funds than one would anticipate and the second group might be willing to make personal sacrifices to establish and operate a school dedicated to the American Indian.

2. The criteria by which the appropriateness and quality of medical education is being judged today are in the process of change. At least in theory the concept of the practitioner with broad knowledge and skills, but considerably less depth, is widely and perhaps appropriately accepted. Hence, it may be that a school oriented toward broad general training to serve as the first step in upgrading the health care of the American Indian is a valid concept.
3. Geographic dispersion is certainly a serious problem as is the smallness of the hospital, yet as a base for development of a primary care physician, that might be a start. If one looks back to my first point about the potential availability of money, it may be that there is at least a partial solution to this problem there if those monies actually become available.
4. There is, no doubt, need for health education, health aids and allied health personnel which the community colleges could help to educate; and with funds from private sources I suppose it is possible that those colleges could be upgraded to provide supporting education even for medicine.

For the above reasons, I would not consider the situation one without any hope, if one looks at the need of the American Indian, the possibility that a less than ideally trained primary care physician could contribute to that need, and today's climate in which support for such a venture might be greater than one would at first glance expect. There is no doubt that it will be a different kind of education, Dan, but is possibly an acceptable first step for the American Indian.

Unfortunately my knowledge of the American Indian, if such a generalization is justified, is limited; but what knowledge I have leads me to believe that the large majority have little interest in modern education and modern living. If that is true or substantially correct, then one of the major difficulties to be faced by such a new school as is proposed will be finding individuals who are capable and interesting in moving into a field such as medicine.

I'd be happy to have your response to these thoughts, for we both recognize that they are made from a great distance both physically and in the sense of my knowledge of the local situation.

With best personal wishes."

Discussion ensued on the merits of such an undertaking; however, it was determined to re-invite Dr. McKenzie to speak on the status of the proposed American Indian School of Medicine prior to further discussion.

UNIVERSITY OF ARIZONA — COLLEGE OF MEDICINE

Neal A. Vanselow, M.D., Dean, University of Arizona College of Medicine gave a report on the current status of the College of Medicine. The size of the class is being increased from 71 to 80 students. Due to the three-year curriculum change the College is able to invite 20 second year transfer students to the University of Arizona with preference being given to Arizona residents. Dr. Vanselow informed the Committee that initial stages of building a College of Medicine are past and that more activity in graduate and continuing medical education can now be expected. Candidates for an Associate Dean are now being interviewed and it is hoped to have one aboard by January 1, 1975. Further, as soon as the Associate Dean is there, the College of Medicine will seek accreditation from AMA for its continuing medical education activities.

SECTION ON ACCREDITATION

Dr. Sheeley informed the Committee that the Section had met immediately prior to the Medical Education Committee meeting to consider several topics.

Pre-survey Questionnaire

The Section on Accreditation reviewed the Pre-survey Questionnaire utilized since the beginning of the Association's accreditation program. It was determined to continue use of the Questionnaire without modification.

In the case of re-survey for continued accreditation of continuing medical education activities it was determined to have the Pre-survey Questionnaire completed by the institution. The survey team will utilize the report of the previous survey team and the new Pre-survey Questionnaire in its re-survey. It was further determined that the re-survey team should be comprised of essentially the same members who participated in the original site survey.

Continuing Medical Education Conferences

Dr. Sheeley advised that the Section considered possible CME conferences for the smaller hospitals. Note was made of the success of the California Medical Association in conducting such conferences to acquaint hospital administrators and their respective Boards of Trustees in the importance of an active program in continuing medical education. After considerable discussion it was determined that it might be of more value to take accredited CME programs to the hospitals of smaller communities rather than having the small hospitals seek accreditation for themselves. It was agreed to consider this further during future meetings.

J.C.H.A. — Requirements in CME

Dr. Sheeley informed the Committee that due to the inquiry of Boswell Memorial Hospital concerning the J.C.H.A.'s requirements in continuing medical education, staff had received Standard VI in the accreditation manual for hospitals which states as follows.

"The medical staff shall provide a continuing program of professional education, or give evidence of participation in such a program."

"Interpretation:

There shall be a program of continuing medical education designed to keep the medical staff informed of significant new developments and new skills in medicine. Medical staff education should

include hospital-based activities as well as educational opportunities available outside of the hospital. Hospital-based programs should be planned and scheduled in advance, and should be on a continuing basis. Documentation of these activities should be kept in order to evaluate the scope, effectiveness, attendance and amount of time spent in such efforts.

The results of medical care evaluation studies should be utilized as an important contribution to the continuing medical education program of the medical staff."

It was further reported that staff had corresponded with the Joint Commission questioning whether the Association's requirement in reporting CME activities and accreditation of a hospital's CME activities would satisfy Standard VI. A reply is anticipated in the near future.

SECTION ON CERTIFICATION

Dr. Taylor reported that the Section met this afternoon to consider the disposition of active members as of July 1, 1971 who had not submitted satisfactory reports of continuing medical education activities to date. A total of 113 physicians have not submitted satisfactory reports; however, many have submitted partial reports or letters of explanation.

The Section recommended to report to the Grievance Committee eight members to whom the Section felt the Association should show lenience due to extenuating circumstances; seven members who submitted partial applications and indicated their desire to make up activities should be placed on probation status; one member should be excused from CME activities due to a health handicap. It was recommended to report the balance of the delinquent physicians to the Committee without recommendation.

It was moved and carried to report to the Grievance Committee those members who had not submitted a satisfactory report of continuing medical education activities as recommended by the Section on Certification.

SECTION ON GRADUATE MEDICAL EDUCATION

Dr. Layton reported that the Section met today with Dr. Vanselow who shared his experience in the Michigan Statewide House Officer Training System (SHOTS). It was determined that the next meeting would include members of the developing Maricopa County Graduate Medical Education Group. The meeting is scheduled for October 24, 1974.

Membership

The Board of Directors requested that the Section consider including as a member a house officer. Staff is to provide a list of house officers to Dr. Layton for selection of house officer representation.

SECTION ON REQUIREMENTS

Dr. Wagner reported that the Section gave final approval to the proposed 1975 Guidelines for the Certificate in Continuing Medical Education. Dr. Wagner informed the Committee of several minor changes.

It was moved and carried to approve the draft of the guidelines for the 1975 Certificate in Continuing Medical Education and staff was instructed to have the guidelines printed for distribution.

Application Fee

There was discussion regarding the \$10 application fee assessed each physician applying for the Certificate in Continuing Medical Education. It was noted that AMA charges \$5 to process the application and grant the Physician's Recognition Award, leaving \$5 to ArMA to assist in offsetting its expenses of the program.

It was moved and carried to recommend to the Board of Directors that a resolution be introduced to the House of Delegates for a dues increase to cover the expenses of the Continuing Medical Education program in lieu of the application fee.

Meeting adjourned 8:45 p.m.

William E. Crisp, M.D.,
Secretary

ORGANIZATIONAL MEETING OF THE AD HOC COMMITTEE TO REPEAL P.S.R.O.

The meeting of the Ad Hoc Committee to Repeal P.S.R.O. of the Arizona Medical Association, Inc., held at 810 West Bethany Home Road, Phoenix, Arizona, on Saturday, October 5, 1974, convened at 1:53 p.m., James M. Hurley, M.D., Chairman, presiding.

CHARGE AND RESOLUTION SUBSTITUTE 9-74

The chairman reviewed the charge to the Committee as follows:

"To develop a plan for implementing Substitute Resolution 9-74. Such plan should include all aspects of the resolution, particularly cost of its implementation, and a program of action. This plan would be submitted to the Board of Directors for final approval."

The Committee then reviewed the details of the resolution adopted by the House of Delegates on April 27, 1974, as set forth below:

"WHEREAS, The House of Delegates of the Arizona Medical Association, Inc., is a group of physicians who represent member physicians in the private practice of medicine in this state; and

WHEREAS, Public Law 92-603 established Professional Standards Review Organizations as the review method for evaluating the "need for," the "quality of" and the "level at which health care is delivered;" and

WHEREAS, The medical profession endorses peer review as evidenced by the existing Foundations for Medical Care and review committees of the medical staffs of hospitals; and

WHEREAS, It does not support or endorse review of professional services by non-professionals; and

WHEREAS, The P.S.R.O. law could usurp fundamental rights and duties of physicians toward their patients; and

WHEREAS, The P.S.R.O. could permit violation of patient/physician confidentiality by representatives of the federal government; and

WHEREAS, The P.S.R.O. law cannot be implemented without our active cooperation; therefore be it

RESOLVED, That the House of Delegates of the Arizona Medical Association go on record as being opposed to the P.S.R.O. law and will actively work toward its repeal by deletion of Section 249-F of Public Law 92-603, and will instruct our delegates to

the AMA to support this position on P.S.R.O.; and be it further

RESOLVED, That the Arizona Medical Association proceed with a plan outside the purview of the Federal P.S.R.O. law to organize a statewide medical peer review program emphasizing and safeguarding local physician autonomy; and be it further

RESOLVED, That our Arizona Congressional delegation be informed of this action of the Arizona Medical Association House of Delegates."

Considerable and indepth discussion ensued on the above two items and their many ramifications and problems.

Dr. Cloud, member of the Board of Trustees of the AMA, reviewed the current activities of the AMA and the Congress, indicating that there is some reason to believe the entire program could be delayed because of a Congressional fight over funding. He also indicated that 19 amendments had been submitted by the AMA in an attempt to make the program more liveable.

Following extensive debate and discussion the following actions were taken:

Information Brochure

It was moved and carried to recommend to the Board of Directors that the Association provide to each member of ArMA an ample supply of a brochure entitled "My Patients and P.S.R.O." (text follows) and urge each member to distribute the brochure to his patients.

"Late in 1972, as part of a thick, complex bill amending the Social Security Law, Congress adopted, almost without notice, a provision which will completely alter the practice of medicine in the United States. At the time, most Congressmen were unaware of its meaning.

This section, called the Professional Standards Review Organization Amendment or 'P.S.R.O.' gives the Secretary of the Department of Health, Education and Welfare in Washington, D.C. the power to dictate how individual physicians may treat individual patients if the patients are Medicare or Medicaid recipients.

This is done under penalty of fines, and requires the physician to practice according to computerized standards and norms, rather than using his best medical judgment with each individual patient.

HEW will tell your doctor whether you may be admitted to the hospital and then, how long you should stay.

HEW will then dictate to your physician what tests can be ordered, what treatment you can have, and what drugs may be prescribed for you.

HEW can further review all of your records, both in the hospital and in the physician's office privacy and confidentiality will no longer exist.

Payments can be denied to the patient for treatment, if in the opinion of HEW, it was not considered medically necessary, or could have been provided in another, more economical hospital or institution.

In other words, some government bureaucrat, who has never seen you, can dictate the type of treatment, the place of treatment(and the length of treatment for your illness.

Aside from the fact that patient privacy will be invaded, implementation of P.S.R.O. will cause the creation of a vast new federal bureaucracy which, by its

very size, will not save money but will push the cost of medical care even higher.

Fortunately, several Congressmen have seen the dangers of this bad law and have started a movement for the repeal of P.S.R.O. This law can be repealed if enough patients write to their Senators and Congressmen, protesting government meddling with their health.

As your physician I would urge you to consider this matter and ask your Congressman to vote for repeal. Here are their addresses:

Honorable Paul Fannin	Honorable
United States Senate	Barry Goldwater
Room 1313, Dirksen	United States Senate
Senate Office Bldg.	Room 440, Russell
Washington, D.C. 20510	Senate Office Bldg.
	Washington, D.C. 20510
Honorable	
John B. Conlan	Honorable
House of Representatives	John J. Rhodes
Room 249, Cannon	House of Representatives
House Office Bldg.	Room 2310, Rayburn
Washington, D.C. 20515	House Office Bldg.
	Washington, D.C. 20515
Honorable Sam Steiger	
House of Representatives	Honorable
Room 126, Cannon	Morris K. Udall
House Office Bldg.	House of Representatives
Washington, D.C. 20515	Room 1424, Longworth
	House Office Bldg.
	Washington, D.C. 20515

Cost estimate based on 200 copies per member (2300) would be \$9,281.60 for the first 460,000 copies.

Medical Staff Poll

It was moved and carried to recommend to the Board of Directors that the Association request that each hospital medical staff poll its members using the following three-part questionnaire, or one similar to it.

"POLICY ON RELATION OF THE MEDICAL STAFF TO GOVERNMENT AND THIRD PARTY CONTRACTS

1. Whereas, P.S.R.O. has been rejected by the majority of the medical profession because it will lower quality, increase costs and ration medical services, the proper and ethical alternative to P.S.R.O. is that medical staff physicians should **continue** ethical practice and peer review for quality control under the committees of the staff, including utilization review.

() I approve the above statement

() I do not approve the above statement

2. The practicing doctor and the medical staff are not parties to the hospital's contract with Medicare. The medical staff and its utilization review and other committees **will not accept or participate in PSRO functions:** Certification prior to admission and on admission, certification of lengths of stay by percentiles, and of treatment by government approved manuals, accountable to the Secretary of HEW for fiscal control.

() I approve the above statement

() I do not approve the above statement

3. Should the hospital administration contract require it to accept PSRO-type controls, the hospital board should request that the government itself provide the doctors to administer P.S.R.O., or the board of the hospital **may employ non-staff doctors**, at gov-

ernment expense, to do this fiscal utilization review. The medical staff will hold the PSRO-doctors responsible for any denial of benefits and the rationing of medical services.

() I approve the above statement

() I do not approve the above statement"

Public Education Program

It was moved and carried to recommend to the Board of Directors that the Association endorse the principle of purchasing TV and radio time and newspaper space to present the P.S.R.O. story to all Arizona citizens.

It was understood that should the above principle be endorsed, a detailed program and specific costs would be developed by the Ad Hoc Committee to repeal P.S.R.O.

Improvement of Existing Programs

It was moved and carried to recommend to the Board of Directors that the Association support the improvement by the various committees of each hospital concerned with the quality of care by helping them implement more comprehensive measures for evaluation of quality care. It should be clearly understood each hospital should set its own criteria for evaluation and such evaluation should remain at the hospital level, since it is at this level most practicing physicians participate and have input into the medical system.

General Membership Poll

It was moved and carried to recommend to the Board of Directors that the Association conduct a poll of its members to determine the current feelings about participating in P.S.R.O. and/or continuing to seek repeal of the law.

Dr. Cloud indicated that he would try to obtain a copy of a poll on this subject taken recently in Washington state.

NEXT MEETING

It was determined that the next meeting would be held after the next Arizona Medical Association Board of Directors' meeting and after the American Medical Association's clinical meeting. Date tentatively set for 1:30 p.m. on Saturday, December 14, 1974.

Meeting adjourned 5:16 p.m.

William E. Crisp, M.D.
Secretary

GRIEVANCE COMMITTEE

The meeting of the Grievance Committee of the Arizona Medical Association, Inc., held at 810 West Bethany Home Road, Phoenix, Arizona on Thursday, October 10, 1974, a quorum being present convened at 7:15 p.m., Philip E. Dew, M.D., Past-President and Chairman, presiding.

CONTINUING MEDICAL EDUCATION REQUIREMENT

Educational Program

Dr. Dew reviewed the educational program relating to the mandatory nature of the CME requirement over the past three years as follows:

January 1971

Arizona Medicine — Minutes, ad hoc Committee on Continuing Medical Education, meeting October 27, 1970.

February 1971

Arizona Medicine — Minutes, ad hoc Committee on Continuing Medical Education, meetings November

- 24 and December 15, 1970.
- March 1971
Arizona Medicine — Minutes, ad hoc Committee on Continuing Medical Education, meeting January 12, 1971.
- 3/8/71
 Paragraph in **Medical Memos** advising that the House of Delegates will be considering the resolution.
- May 1971
Arizona Medicine — Minutes ad hoc Committee on Continuing Medical Education, meeting March 16, 1971.
- 5/10/71
 Paragraph in **Medical Memos**.
- June 1971
Arizona Medicine — Resume of minutes of House of Delegates meeting May 1, 1971.
- 6/1/71
 Entire Continuing Medical Education (CME) Resolution published in **Medical Memos**.
- July 1971
Arizona Medicine — Editorial, "Medical Education" — James L. Grobe, M.D.
- 8/10/71
 Paragraph in **Medical Memos**.
- Sept. 1971
Arizona Medicine — Minutes, Medical Education Committee, meeting July 6, 1971.
- 9/1/71
 1972 Application and instruction booklet sent.
- 9/16/71
 Paragraph in **Medical Memos**.
- December 1971
Arizona Medicine — Letters to Editor — Murray Rosen, M.D./Robert E. T. Stark, M.D.
- January 1972
Arizona Medicine — Topics of Interest — "AMA Physician Award".
- January 1972
Arizona Medicine — Minutes, Medical Education Committee, Meeting, November 9, 1971.
- March 1972
Arizona Medicine — Letters to Editor — Neil C. Clements, M.D./Robert E. T. Stark, M.D.
- April 1972
Arizona Medicine — Minutes, Medical Education Committee, Meeting January 25, 1972.
- June 1972
Arizona Medicine — Resume of minutes of House of Delegates meeting April 29, 1972.
- June 1972
Arizona Medicine — Minutes, Medical Education Committee, Meeting April 6, 1972.
- 7/5/72
 Paragraph in **Medical Memos**.
- August 1972
Arizona Medicine — Minutes, Medical Education Committee, Meeting June 8, 1972.
- 8/16/72
 Paragraph in **Medical Memos**.
- 9/26/72
 Paragraph in **Medical Memos**.
- 11/1/72
 1973 Application and instruction booklet sent.
- January 1973
Arizona Medicine — Minutes, Medical Education Committee, Meeting November 8, 1972.
- 3/12/73
 Paragraph in **Medical Memos**.
- May 1973
Arizona Medicine — Minutes, Medical Education Committee, Meeting February 22, 1973.
- 5/29/73
 Paragraph in **Medical Memos**.
- June 1973
Arizona Medicine — Resume of minutes of House of Delegates meeting April 28, 1973.
- July 1973
Arizona Medicine — Minutes, Medical Education Committee, Meeting April 19, 1973.
- 10/22/73
 Paragraph in **Medical Memos**.
- December 1973
Arizona Medicine — Minutes, Medical Education Committee, Meeting September 27, 1973.
- 12/1/73
 1974 Application and instruction booklet sent.
- January 1974
Arizona Medicine — Minutes, Medical Education Committee, Meeting November 15, 1973.
- February 1974
Arizona Medicine — President's Page — "Is the Sky Falling In?" — Philip E. Dew, M.D.
- February 1974
Arizona Medicine — Special Cover.
- 2/15/74
 Paragraph in **Medical Memos**.
- April 1974
Arizona Medicine — Minutes, Medical Education Committee, Meeting January 31, 1974.
- 5/15/74
 Paragraph in **Medical Memos**.
- 5/30/74
 Special letter sent to all who had not filed application to date.
- 6/20/74
 Paragraph in **Medical Memos**.
- 6/20/74
 Special letter sent to all who had not filed application to date.
- July 1974
Arizona Medicine — Minutes, Medical Education Committee, Meeting April 11, 1974.
- 7/5/74
 Special letter sent to all who had not filed application to date.
- July 1974
 Letter from Dr. Payne enclosed with all AMA-PRA applications to all Arizona physicians eligible for 1974 PRA.
- 8/6/74
 Medical Education Committee members assigned to make personal contact with all who had not filed application to date.
- 10/1/74
 Special letter advising of Medical Education Committee actions.

Resolution 2-71

The subject resolution adopted 5/1/71 by the House of Delegates which established the CME program was reviewed as follows:

"WHEREAS, The House of Delegates of the Arizona Medical Association, by adoption of substitute Resolution 9-70, has recognized that demonstrated participation by physicians in continuing education is becoming an expected part of the ongoing qualifications of physicians to practice their profession; and

WHEREAS, The House of Delegates of the Arizona Medical Association, by adoption of substitute Resolution 5-70, has stated that membership in the Arizona Medical Association should assure the public of physicians who continue to maintain their competency through continuing medical education; and

WHEREAS, The Ad Hoc Committee on Continuing Medical Education, as instructed by the House of Delegates through substitute Resolution 5-70, has extensively considered requirements for continuing medical education which are to be a **requisite** for continuing membership in the Arizona Medical Association; therefore, be it

RESOLVED, That each member of the Arizona Medical Association complete a minimum TOTAL of 150 credit hours of continuing medical education earned over a continuous three-year qualifying period, and be required to submit a report of those educational activities to the Medical Education Committee of the Arizona Medical Association every three years.

A credit hour is on the basis of one hour of participation in a continuing medical education activity. A minimum of sixty credit hours must be obtained from any combination of **Required Education** categories (Categories 1 through 6). The remaining ninety credit hours may be acquired from any combination of **Elective Education** categories (Categories 7 through 10).

REQUIRED EDUCATION

Category 1. Internship — Residency (or Fellowship). An AMA approved internship, residency, or fellowship is credited at fifty credit hours per year for full-time training.

Category 2. Education for an Advanced Degree.

Education leading to an advanced degree may be used for credit if the degree is in a medical field or a medically-related science such as medical care administration, legal medicine or immunology. Fifty credit hours are allowed for each full academic year of study within the qualifying record.

Category 3. Research in Lieu of Training.

Credit for medical research is given **only** for full-time medical research. Fifty credit hours are allowed for each full year of research.

Category 4. Continuing Medical Education Courses.

a. All courses produced by an AMA accredited institution, and until all institutions have had an opportunity to become accredited, courses offered by any organization or institution listed as a course

sponsor or co-sponsor in "Continuing Education Courses for Physicians", Journal of American Medical Association, are creditable.

b. Medical School or Postgraduate Medical School Courses.

c. Annual AMA and ArMA Scientific Medical Meetings. (Only attendance at scientific sessions is creditable.)

d. National, Regional and State Scientific Medical Meetings of Specialty Societies and courses originated and directly presented by said Societies.

e. Individual ArMA approved courses or meetings.

f. Other ArMA approved education activities; e.g., sabbatical leave, post-graduate traineeship.

Category 5. Teaching.

One credit hour is allowed for each "clock" hour of teaching medical students or physicians. Maximum credit of 30 hours is allowable for a qualifying period. An additional 60 credit hours may be claimed as elective hours in Category 10 (additional teaching).

Category 6. Papers or Publications.

Ten credit hours may be claimed for each scientific paper or publication. A paper must be presented to a medical society or an organization whose membership is restricted to physicians. A publication must appear in a recognized medical or medically related scientific journal. Scientific papers must have been presented or have been published during the qualifying period.

ELECTIVE EDUCATION

The remaining ninety credit hours needed to maintain membership in the Arizona Medical Association may be acquired from any combination of **Elective Education** Categories (Categories 7 through 10).

Category 7. Scientific Medical Meetings — Local.

A limit of fifty credit hours per qualifying period may be obtained in attending local scientific meetings such as hospital staff conferences, lectures, seminars, and local professional society meetings.

Category 8. Other Education Activities.

Educational activities approved in advance may be used with a fifty-hour credit limit.

Category 9. Scientific Exhibits.

Ten credit hours are allowed for preparing and personally presenting a scientific exhibit at a professional meeting of a medical society or a medical specialty society.

Category 10. Additional Teaching.

Sixty credit hours may be claimed for teaching in this category in addition to the thirty credit hour limit in Category 5. The requirements for credit are the same as for Category 5;

and be it further

RESOLVED, That all **active members** of the Arizona Medical Association as of July 1, 1971 must submit their initial report of continuing medical education activities to the Medical Education Committee no later than June 30, 1974 and every three years thereafter in order to maintain their active membership. Required reports of continuing medical education activities may be submitted to the Medical Education Committee for validation beginning July 1, 1972 and every three years thereafter by members of the Association if they so desire; and be it further

RESOLVED, That new active members of the Arizona Medical Association subsequent to July 1, 1971 will be given a qualifying period of three years from July 1, of the year their active membership commenced, to fulfill the requirements of continuing medical education; and be it further

RESOLVED, That consideration be given those members who receive reasonably equivalent awards and/or certificates of continuing medical education from the American Medical Association or recognized national professional societies, as satisfying the requirements for continuing medical education of the Arizona Medical Association; and be it further

RESOLVED, That the Medical Education Committee will report annually to the Board of Directors of the Arizona Medical Association names of those members who have submitted acceptable reports of three years of continuing medical education activities. Those members will then be sent appropriate certificates of commendation by the Board of Directors; and be it further

RESOLVED, That the Medical Education Committee will report annually to the Grievance Committee those members who have failed to submit a report of continuing medical education activities as required, or who have submitted an unsatisfactory report. The Grievance Committee shall serve as an Appeal Board in these matters and make recommendations to the Board of Directors that:

- a. There is sufficient reason for a member not to participate in the Continuing Medical Education Program for reasons of ill health, handicap, temporary absence from practice, or other extenuating circumstance,
- b. The report submitted is satisfactory and acceptable or
- c. A member be suspended or expelled according to the procedure outlined in Chapter VII, section 4, (e)."

Legal Review

Mr. Edward Jacobson reviewed the bylaws and experience with a similar program in Oregon as well as reviewing the need for and procedures relating to due process as it relates to denying membership in a professional association such as ArMA.

Positive Action

It was moved and carried to recommend to the Board of Directors that each case be treated individually and that no positive action toward expulsion, etc., be taken prior to 12/31/74.

Individual Case Determinations

The committee reviewed all 93 individual physicians who had not complied with the CME requirements as of 5:00 p.m. on October 10, 1974.

It was moved and carried to recommend to the Board of Directors that:

- A. One member be granted Associate Membership status when properly processed by the appropriate County Medical Society.
- B. Fifteen members be granted a one-year extension, due to extenuating circumstances, in order to complete the CME requirement.
- C. Fifteen be granted the certificate based on the fact that they had completed the requirement

even though it was not reported in the prescribed fashion. In the cases where the \$10 fee has not been paid, the member is to be billed for the fee.

- D. One case is to be deferred for additional information and acted upon at a subsequent meeting.
- E. Eleven be excused from the requirement to comply, due to extenuating circumstances, for the first three-year cycle, but asked to comply during the second three-year cycle.
- F. Fifty members be given an extension of time to 12/31/74 in order to comply.

Public Information Program

It was moved and carried to recommend to the Board of Directors that the Public Relations Committee be asked to develop a public information program dealing with the positive aspects of the CME requirement program. Such program to be reviewed by legal counsel.

Fee

It was moved and carried to recommend to the Board of Directors that applications which are complete in all aspects except receipt of the \$10 fee be approved. The certificate to be held up while the member is billed for the \$10 fee.

Specialty Society Participation

It was moved and carried to recommend to the Board of Directors that names of those who have not completed the requirement be submitted to their specialty societies with a request that they encourage the members to complete the requirement.

Meeting adjourned 11:21 p.m.

William E. Crisp, M.D.
Secretary

AD HOC COMMITTEE ON PATIENT COMPENSATION INSURANCE

The meeting of the Ad Hoc Committee on Patient Compensation Insurance of the Arizona Medical Association held at 810 W. Bethany Home Road, Phoenix, Arizona on Saturday, October 12, 1974 convened at 1:36 p.m., Richard T. McDonald, M.D., chairman presided.

BACKGROUND MATERIAL REVIEW

Dr. McDonald reviewed the origin of the idea of providing some form of insurance for all patients so that those who experience adverse results, through no fault of the physician, would be compensated. He also reviewed the following articles and correspondence on the subject:

- A. Richard P. Bergen (AMA) letter of June 20, 1974.
- B. **Elective Surgery: Trip Insurance** by David S. Rubsamen, M.D., LL.B.
- C. **No-Fault Liability for Adverse Medical Results** by David S. Rubsamen, M.D., LL.B.
- D. **Proposed: "No-Fault" Insurance to Stem Malpractice Suits** by Jeffrey O'Connell, LL.B.

Following extensive discussion on many aspects of the subject the following action was taken.

It was moved and carried to investigate with the insurance industry the feasibility of providing patient compensation insurance.

Meeting adjourned 2:38 p.m.

William E. Crisp, M.D.,
Secretary

OCCUPATIONAL HEALTH COMMITTEE

A telephone conference was conducted by those members who attended the October 5, 1974, meeting of the Occupational Health Committee of the Arizona Medical Association on October 25, 1974, commencing at 11:46 a.m., Joseph M. Hughes, M.D., Chairman, presiding.

I.C.A. RECOMMENDATION

Dr. Hughes reviewed the fact that there was confusion over the action of the committee taken on October 5, 1974, as it related to fee schedule recommendations.

It was moved and carried to recommend to the Board of Directors that the Arizona Medical Association petition the Industrial Commission of Arizona to adopt the following conversion factors.

Conversion		Conversion	
Factor	Study	Factor	Study
Medicine	10.0	'64 CRVS or	.83 '69 CRVS
Surgery	8.5	'64 CRVS or	38.00 '69 CRVS
Radiology	7.5	'73 Amer. Col. of Radiology	RVS
Laboratory	6.5	'64 CRVS or	.27 '69 CRVS
Anesthesia	10.0	'73 Amer. Soc. of Anesthesiology	RVS, with a one-unit modifier for emergency cases.

LABORATORY

Mr. Robinson pointed out that it had been pointed out to him that the above conversion factor for laboratory services is identical to the conversion factor adopted by the I.C.A. on 2/1/73 — RECEIVED FOR INFORMATION.

Meeting adjourned 11:58 a.m.

William E. Crisp, M.D.
Secretary
Bruce E. Robinson
Executive Director

MEDICAL ECONOMICS COMMITTEE

The meeting of the Medical Economics Committee of the Arizona Medical Association, Inc., held November 2, 1974 at 810 West Bethany Home Road, Phoenix, Arizona, convened at 1:28 p.m., Richard S. Armstrong, M.D., chairman, presiding.

MINUTES

The minutes of the meeting held March 30, 1974 were approved as distributed.

ARBITRATION

Mr. Robert L. Logan, Jr., Manager, Claim Department, Professional of the San Francisco office of the Travelers Insurance Companies presented, in great depth, the "Monterey Arbitration Project" as being established in Monterey County, California.

Extensive discussion ensued on the many aspects of this project and its applicability to Arizona.

It was moved and carried to recommend to the Board of Directors that the Association encourage and support efforts of interested County Medical Societies and appropriate Hospital Groups to establish arbitration mechanisms as embodied in the Monterey Project. That the Association continue its statewide education program on malpractice in conjunction with the Travelers Insurance Companies.

INFORMED CONSENT

The Chairman reviewed the articles which appeared in recent issues of *Arizona Medicine* on informed consent. He pointed out that these articles were a part of an education program started by this committee. Mr. Robinson reported that additional materials on the subject will be forthcoming. RECEIVED.

MANDATORY FULL DISCLOSURE BY INSURANCE COMPANIES

Dr. Armstrong reviewed Resolution 10-74 on the subject matter and related correspondence from the Insurance Department of the State of Arizona which outlined existing mechanisms that can be used by patients who feel that they have purchased health insurance that was misrepresented at the time of purchase.

Several recommendations were made:

1. That we request physicians, who have had patients complain about insurance coverage that has been misrepresented to them, to document and forward the information to the Association so that we will have factual information with which to develop a case for presentation to the Department of Insurance.

2. That we repeat in *Medical Memos* the procedures to be used when this situation arises.

DOCTORS COLLECTIVE BARGAINING

The Chairman reviewed the resolution written by Richard W. Switzer, M.D. on the subject topic with an eye as to whether this resolution should be introduced by this committee at the next House of Delegates meeting.

UNIFORM HEALTH INSURANCE CLAIM FORM

Discussion ensued on Resolution 8-74 mandating a program to get the Uniform Health Insurance Form utilized more widely in Arizona.

It was agreed that at this time legislative efforts would not be undertaken.

Mr. Robinson stated that an effort is underway to obtain a listing of companies selling health insurance in Arizona so that a letter could be developed encouraging them to adopt the use of this form.

It was moved and carried to recommend to the Board of Directors that each member be provided with an initial supply of 100 two-part forms, at no cost, urging him to use the forms.

RESOLUTION 6-74 REVISED

The subject resolution directing that ICA negotiations be moved back into the Medical Economics Committee was discussed.

It was determined to recommend to the Articles and Bylaws Committee that the wording be kept very general so that the committee will have maximum freedom to handle the matter as they see fit.

Meeting adjourned 3:58 p.m.

William E. Crisp, M.D.
Secretary
Bruce E. Robinson
Executive Director

GRIEVANCE COMMITTEE

The meeting of the Grievance Committee of the Arizona Medical Association, Inc., held at 810 West Bethany

Home Road, Phoenix, Arizona on Sunday, November 10, 1974, a quorum being present, convened at 10:30 a.m., Philip E. Dew, M.D., Past-President and Chairman, presiding.

MINUTES

The minutes of the meeting held October 10, 1974, were approved as distributed.

AMERICAN MEDICAL ASSOCIATION LETTER

Mr. Jacobson reviewed the letter of October 22, 1974, from Bernard D. Hirsh, General Counsel of the American Medical Association as follows:

"I am enclosing a news item which appeared in the October 21 issue of AM News concerning the continuing education program of the Oregon Medical Association.

I am still of the conviction that a great deal of thought should be given before members are expelled for failure to comply with the requirements of a medical society's continuing education program. Damage to the physician's professional standing, humiliation, and economic loss can be anticipated.

If litigated, the medical society would be called upon to prove that its program served the public interest, that it is reasonable, not arbitrary, and served the intended purpose of upgrading the physician's skills in treating patients in his field of practice. Furthermore, in litigation you might run into problems of proof such as measures of learning, value of experience, self-learning, etc. as compared to requirements for lecture attendance and so forth.

I feel that perhaps the considerations applicable to continuing education for lawyers are also applicable to physicians. If this is true, then a great deal of improvement in the methods, content and general quality of continuing education is necessary before expulsion can be safely used as a weapon for forcing attendance. The difficulty lies in tailoring a program to meet the needs of highly specialized practitioners who frequently confine themselves to sub, or sub-sub specialties.

The courts have frequently said that as a general rule they will not interfere with the internal affairs of a professional association. Then, they often proceed to do so on the ground that in the particular instance there is an overriding public interest. I am convinced, that as in the Falcone case, decided in New Jersey, the courts will seek every means of protecting the membership rights of physicians who enjoy reputations for ethical conduct and for excellence in their professional skills. On the other hand, if you have a physician who has been an unsuccessful defendant in a series of atrocious malpractice cases, such as the Nork case, the court is not likely to interfere if he is thrown out for failure to meet continuing education requirements."

The following is the news article referred to above.

"EDUCATION RULE UNDER REVIEW

Oregon Medical Assn. delegates expressed dissatisfaction with the society's four-year-old continuing education requirements, but voted down a resolution to end the compulsory program.

Instead, delegates at the OMA's 100th annual meeting approved a resolution to seek better ways of assess-

ing physician competence. OMA President Clinton S. McGill, M.D., was directed to appoint a committee to study alternate assessment programs.

The action came as OMA staff began alerting some 117 association members who have thus far failed to report completion of the three-year, 150 hour minimum continuing education program.

The 117 unreported physicians represent about 8% of those eligible for the requirement this year, staff members said, but added that most had probably completed the requirements and had not yet sent in their reports.

Members have until December 31 to turn in reports of their educational record for 1971-73, but the group's Board of Censors will begin hearings after December 1 to find out why reports have not been submitted. Those who fail to meet the deadline, staff members warned, will be expelled — as happened in 1970, during the first year of the mandatory program.

The delegates also decided to participate in the formation of a department of continuing education at the U of Oregon Medical School." — RECEIVED FOR INFORMATION.

INDIVIDUAL CASE REVIEW

Mr. Robinson reported that of the ninety-three cases reviewed at the October 10, 1974 meeting, nineteen had been resolved, leaving seventy four unresolved.

Extended to 7/1/75

Of the fourteen extended to July 1, 1974, seven have responded saying that they can comply by that date; three said they may need more time; four did not respond, one was added to this list, ending with fifteen in this category.

Certificates Granted

At the October 10th meeting the committee recommended to the Board of Directors that fifteen be granted certificates even though they had not reported in the prescribed form. Of that fifteen, eight have complied with the requirement, and two added as of November 10, 1974, leaving nine in this group to be acted upon by the Board of Directors.

Excused For First Three Year Cycle

Of the eleven who were excused from complying during the first three year cycle, two have been cleared, leaving nine in this group.

Extended to 12/31/74

Of the fifty who were given an extension to 12/31/74, seven have been cleared, four sent cards indicating that they could comply by 12/31/74, and two replied that they may need more time, three did not return the post cards, and five wrote letters of explanation, forty are still on this list as of 11/10/74.

It was moved and carried to recommend to the Board of Directors that Certificates be granted to Robert M. Anderson, M.D. and Richard K. Hausman, M.D.

PROGRAM EVALUATION

Extensive discussion ensued on the problem of how best to improve the program, to change the thrust of the program from a punitive one to a constructive one.

It was moved and carried to conduct a meeting for the purpose of getting input on how best to improve

the C.M.E. Program. Invited to the meeting are to be those who have not complied, those who have expressed criticism of the Program, the Executive Committee, the Medical Education Committee and the Grievance Committee. The meeting is to be held at 10 a.m. on Sunday, December 15, 1974 in Room 8403 of the Arizona Medical Center in Tucson.

Meeting adjourned 12:06 p.m.
Wm. E. Crisp, M.D.
Secretary
Bruce E. Robinson
Executive Director

**MATERNAL AND CHILD HEALTH
CARE COMMITTEE**

The meeting of the Maternal and Child Health Care Committee of the Arizona Medical Association, Inc., held at 810 West Bethany Home Road, Phoenix, Arizona on Tuesday, November 5, 1974, convened at 6:49 p.m., Raymond J. Jennett, M.D., chairman presiding.

MINUTES

The minutes of the meeting held September 5, 1974 were approved as distributed.

**SECTION ON DATA COLLECTION
AND ANALYSIS**

Change of Status

It was moved and carried to approve the concept that this section be made an Ad Hoc Committee in order to make its expertise available to all committees of ARMA. Health Information Center

Mr. Robinson reported that activities are ongoing between the section and the Department of Health Services so that adequate physician input will be an integral part of the development of the Health Information Center. Dr. Moore and Mr. Hardy, new director of the Information Systems Bureau are meeting soon to establish the appropriate liaison.

Maternal Mortality Study

SECTION ON MATERNAL SERVICES

It was moved and carried to recommend to the Board of Directors that they provide a budget item of \$1,625.00 to the Maternal and Child Health Care Committee for the continuation of the maternal mortality study through 1975 as follows:

- | | |
|---|--------------------------------|
| 1. Case Gathering. This would probably be done by an obstetrical nurse or midwife. It would consist of going through, on a quarterly basis, all death certificates on women aged 15-50. | |
| | ESTIMATED COST \$ 200.00 |
| 2. Rental of post office box to use for correspondence with the physician's questionnaires | 50.00 |
| 3. Printing | 50.00 |
| 4. Postage | 25.00 |
| 5. Stipend plus mileage for physician investigator. It is anticipated that obstetrical-gynecologic residents in the state programs would be used for this. | |
| | ESTIMATED COST \$1,000.00 |
| 6. Expenses associated with quarterly to semiannual meetings of the committee. | \$ 200.00 |

7. Provision for exhibits and teaching mechanisms for the annual meeting.	500.00
SUB-TOTAL	\$2,025.00

LESS: Arizona Chapter, American College of Obstetrics and Gynecology portion	400.00

TOTAL	\$1,625.00

**PROPOSED REGULATIONS FOR
LICENSING OF HEALTH CARE
INSTITUTIONS — MATERNAL AND
PEDIATRIC SECTIONS**

Dr. Baum reported that the subject regulations would eliminate the requirement for separate Obstetrical and Gynecological Sections in hospitals.

It was moved and carried that the Chairman would draft a letter to the Department of Health Services expressing our criticisms and alternative suggestions. He is to utilize existing Academy of Pediatrics and American College of Obstetricians guidelines.

**SECTION ON PERINATAL PLANNING
Robert Wood Johnson Foundation**

Dr. Daily reported that our application is being considered and that additional material is being developed as a result of recent correspondence. The revised material to be submitted by 12/10/74. It was noted that this committee would meet again before 12/10/74 to review the updated application.

**SECTION ON SERVICES FOR CHILDREN
Arizona State Community Coordinated Child
Care Planning Committee**

It was moved and carried to recommend to the Board of Directors that the Association endorse in principle the Arizona State Community Coordinated Child Care Planning Committee proposal. But would recommend that physicians of varying specialties might have more opportunity for input in the Planning Committee than is presently indicated.

Learning Disabilities

It was moved and carried that for children with known or suspected learning disabilities, orthoptic, developmental vision training (muscle exercises, ocular pursuit, glasses), visual perception training, or visual motor training (laterality training, balance board, etc.) be excluded as a covered service under provisions of Section 12 of the Medicaid Law (i.e., eye care services).

Early Periodic Screening, Diagnosis and Treatment

It was moved and carried that the Maternal and Child Health Care Committee go on record as being in favor of the concept of early periodic screening, diagnosis and treatment being provided by means of a coordinated health care team consisting of physicians, other health professionals, and nonprofessionals. The attached work sheets, flow charts, cost charts, etc., to be considered as a prototype, but to be developed further and defined in detail as to which screening services will be performed by whom. (See attached material on yellow sheets.)
Cost-Effectiveness of Screening Children in the Home

Dr. Friedman reviewed the subject document for the benefit of the committee, — RECEIVED.

OTHER BUSINESS

Abortion Reporting

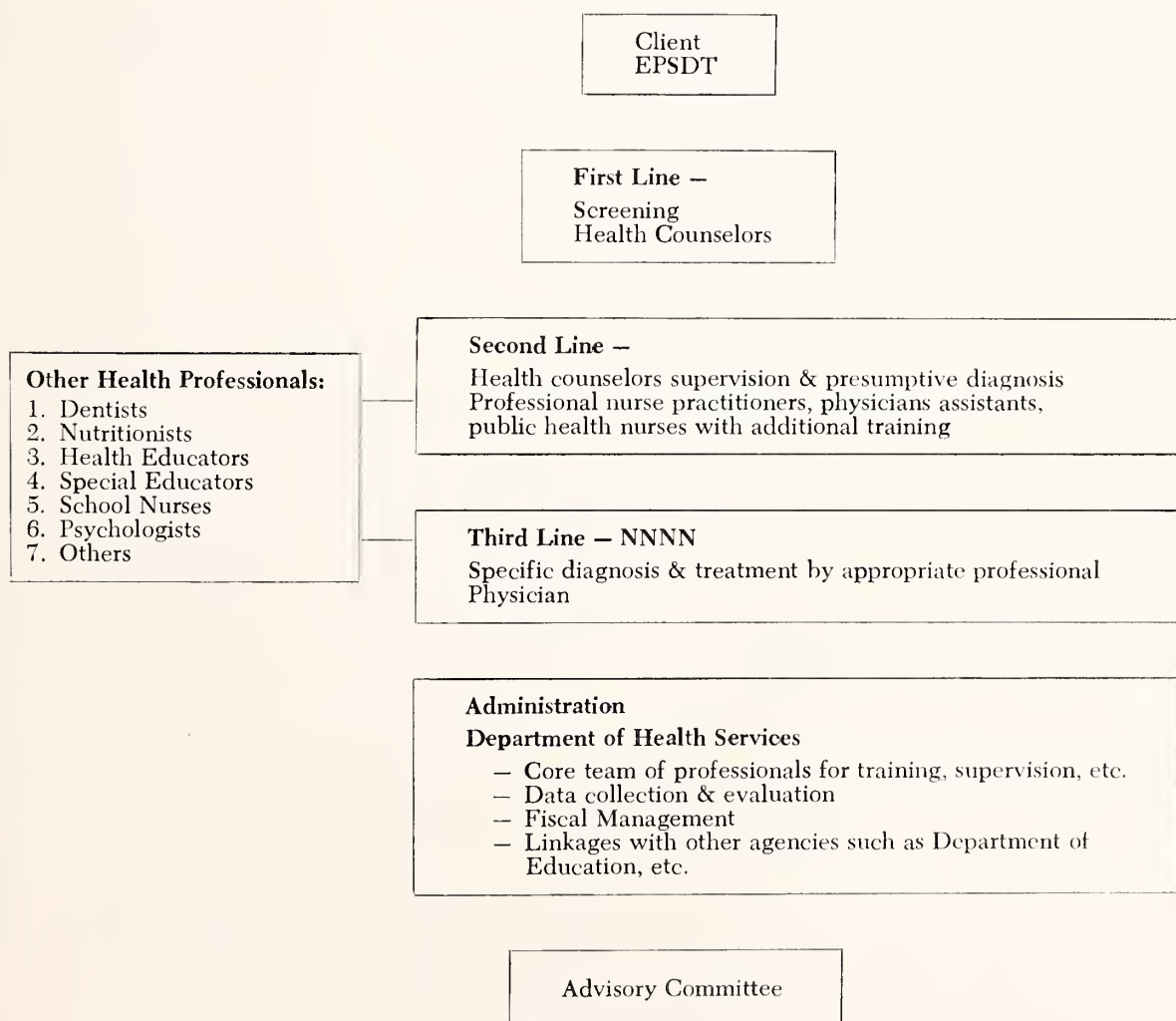
Dr. Baum reported on the current status of the abortion reporting program. It was determined that more information was needed in this regard. It was determined to invite James L. Schamadan, M.D. to the next meeting for the purposes of discussing this matter further.

Meeting adjourned 8:59 p.m.

William E. Crisp, M.D.
Secretary
by

Bruce E. Robinson
Executive Director

PROPOSED EPSDT DELIVERY SYSTEM FLOW CHART



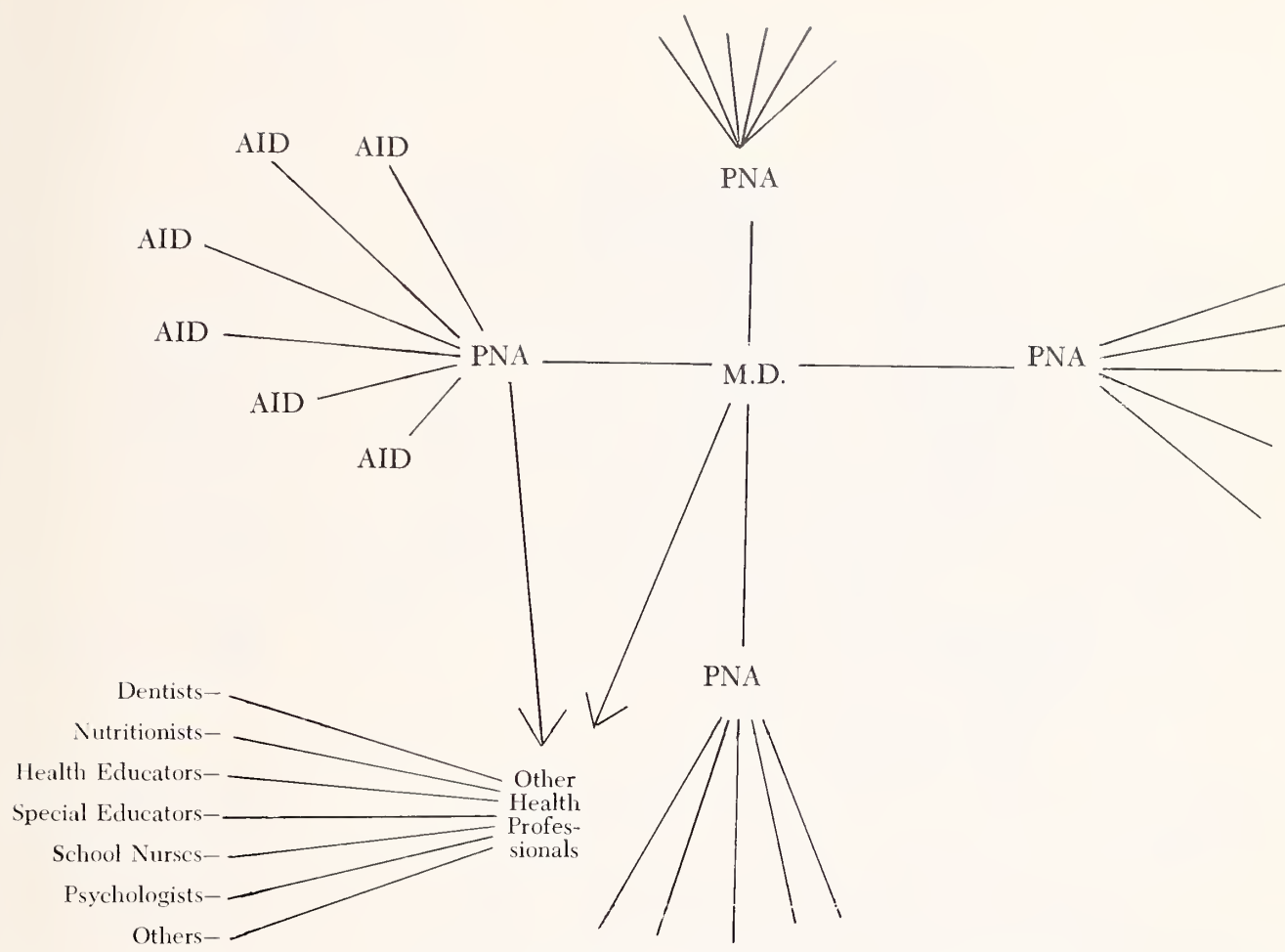
PROPOSED EPSDT DELIVERY SYSTEM

Screening	Function	No. of Clients or People	Sites of Screening Services
1. First line screening for immediate and obvious problems completed by trained health counselors. Health counselors are non-professional people indigenous to the community.	1. Screening 2. Follow-Up & Referral 3. Preventive Counseling a. Nutrition b. Dental Health c. Family Planning d. Emotional Support e. Cardiovascular Risk Factors f. Accident Prevention g. First Aid	200 to 250 families/year/counselor	Clinic & home setting
2. Health Counselor supervision & presumptive diagnosis for significant problems which do not require a physician but a professional level above the health counselor. Referrals to second line screening made by counselors. Also primary referrals by these professionals. Second line screening will be performed by professional nurses, nutritionists, Special Education people, etc.	1. Evaluation of screening problems by health counselors. 2. Appropriate referral to treatment by professional. 3. Training health counselors.	1 professional supervises 6 health counselors.	Clinic & occasionally home setting.
3. Specific diagnosis & treatment by appropriate professional — physicians, dentists, nutritionists, Special Education people, etc., or other eligible professionals.	1. Specific diagnosis & treatment. 2. Referral to individual professional or agencies.	Depending upon severity of problem.	Office, clinic or home

PROJECTED COSTS FOR EPSDT DELIVERY SYSTEM

\$44/child/year		
200 families/counselor—	80,000 families or 160,000 children	
400 counselors	@ \$7,000/ counselor	\$2,800,000
1 professional per 6 counselors	@ \$15,000 15,000 x 70 professionals	1,050,000
*Referral —		
20% referred out of 160,000		
30,000 children sent to physician	@ \$100/treatment/child	3,000,000
Supplies and Other Operating Expenses	@ \$10/child	1,600,000
Travel	@ \$1,000/counselor	400,000
Salaries for Health Services staff		150,000
	TOTAL	\$9,000,000

*This does not include dental referral & treatment.



WORK SHEET EPSDT PROGRAM

Screening	Elaboration	First-line Manpower
1. Medical History	Screening Interview or Questionnaire from <i>A Guide To Screening EPSDT, Medicaid</i> . Pages 72-86	1. Nonprofessional
2. Physical Growth Assessment	<i>Medicaid Screening Manual — Arkansas</i> (Page 7 — No. 5) Types of activities which may be delegated to auxiliary workers may include: 1. Pre-and-Post Testing: Send out invitations for screening, replenish supply of raisins or red-hots for the Development testing procedure as needed, set up testing area for nurse, straighten up afterwards, and send necessary forms. 2. Meet and greet mother or adult accompanying child and advise her of need of urine specimen. Collect specimen if possible. 3. Obtain immunization history (if available). Record information on child's record and attach immunization card to record. 4. Nutrition Assessment—Biochemical, Anthropometric, Dietary (Arizona's) See Attachment I 5. Fill out any necessary laboratory slips. 6. Do tests or procedures when requested and/or instructed by the nurse as abilities permit such as: vision, hearing, urinalysis, PKU, weight, measurement, count pulse and respiration, take temperature if indicated, prepare feces container, etc. 7. Assist with supervision of children in the waiting room.	

	1. Developmental Assessment	1. Nonprofessional
2. Physical Growth Assessment (continued)	2. Physical Growth Assessment Height, weight, head circumference, one other measure for obesity. Group to design questionnaire. Look at questionnaires for each age group.	2. Nonprofessional
3. Developmental Assessment	Medicaid Screening Manual — Arkansas (Page 11) The Denver Developmental Screening Test: Children 0-6 years of age: The Denver Developmental screening test will be used as a basic guide to assess the levels of development and behavior according to: 1. Personal Social — Tasks which indicate the child's ability to get along with people, to take care of himself. 2. Fine Motor — Adaptive — the child's ability to see and use his hands to pick up objects and to draw. 3. Language — The child's ability to hear, carry out commands and to speak. 4. Gross Motor — The child's ability to sit, walk and jump.	3. Nonprofessional
4. Unclothed Physical Inspection — Cardiac Exam		4. Nonprofessional (Aide — parts of exam) Nurse — practitioner type — cardiac
5. Ear, Nose, Throat and Mouth Inspection		5. Nonprofessional
6. Vision Testing		6. Nonprofessional [°]
7. Hearing Testing		7. Preschool: Professional School-Age: Nonprofessional and Professional [°]
8. Anemia Testing		8. Nonprofessional (hemoglobin and hematocrit)
9. Sickle Cell		9. Nonprofessional and Professional ^{°°}
10. Tuberculin Test		10.
11. Urine Screening		11. Nonprofessional— Dip-Stick
12. Nutritional Status		12. Nonprofessional
13. Immunization		13. Professional ^{°°°}
[°] Coordinated with existing school program.		
^{°°} Coordinated with existing State program.		
^{°°°} Per present State law.		



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INDICATIONS: *Therapeutically*, used as an adjunct to appropriate systemic therapy for topical infections, primary or secondary, due to susceptible organisms, as in: • infected burns, skin grafts, surgical incisions, otitis externa • primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia) • secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis) • traumatic lesions, inflamed or suppurating as a result of bacterial infection. *Prophylactically*, the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing.

CONTRAINDICATIONS: Not for use in the eyes or external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of the components.

WARNING: Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where

absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

PRECAUTIONS: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.



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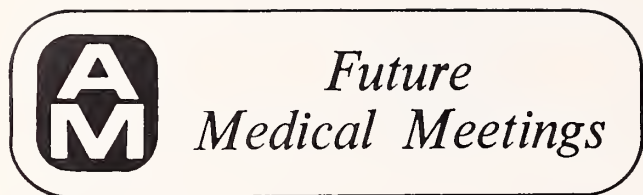
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THE FOLLOWING INSTITUTIONS HAVE RECEIVED ARMA ACCREDITATION FOR CONTINUING MEDICAL EDUCATION.

GOOD SAMARITAN HOSPITAL, PHOENIX
MARICOPA COUNTY GENERAL HOSPITAL, PHOENIX
ST. LUKE'S HOSPITAL AND MEDICAL CENTER, PHOENIX
ST. JOSEPH'S HOSPITAL AND MEDICAL CENTER, PHOENIX
TUCSON HOSPITALS MEDICAL EDUCATION PROGRAM, TUCSON
VETERANS ADMINISTRATION CENTER, PRESCOTT

CONTINUING MEDICAL EDUCATION ACTIVITIES SPONSORED BY THESE INSTITUTIONS RECEIVE CATEGORY 1 CREDIT FOR THE ARMA CERTIFICATE IN CONTINUING MEDICAL EDUCATION AND THE AMA PHYSICIAN'S RECOGNITION AWARD.

PRESCOTT VETERANS ADMINISTRATION CENTER **Continuing Medical Education Program**

1:30 p.m., Building 28, VAC Prescott, AZ

November 14—Neurological Problems
November 21—Urology Conference
December 5—Clinical Pharmacology Conf. on
Antibiotics
December 12—Pulmonary Conference
December 19—Associated Rheumatological
Diseases
December 20—Associated Rheumatological
Diseases

SPONSOR: Veterans Administration

CONTACT:

Charles A. Trahern, M.D.
Coordinator, Continuing Medical Educ.
Veterans Administration Center
Prescott, AZ 86301

Approved for 1½ required hours per session toward the ArMA Certificate in Continuing Medical Education.

ENT

December 10, 1974
Page Hospital, Page, AZ

SPONSOR: Arizona Medical Center, U of A CESA

CONTACT:

George Gorman, M.D.
1355 N. Beaver St.
Flagstaff, AZ 86001

Approved for 2 required hours toward the ArMA Certificate in Continuing Medical Education.

PSYCHIATRIC PROBLEMS OF THE AGED: CLINICAL MANAGEMENT OF THE DISTURBED ELDERLY PATIENT

December 12, 1974
Arizona Medical Center, Tucson, AZ

SPONSOR: Dept. of Psychiatry, U of A
Tucson, AZ

CONTACT: Alan I. Levenson, M.D.
1501 N. Campbell Ave.
Tucson, AZ 85724

Approved for 2½ Required hours toward the ArMA Certificate in Continuing Medical Education.

NEW PSYCHOPHARMACOLOGY

January 10, 1975
Arizona State Hospital, Phoenix AZ
Personnel & Education Bldg.

SPONSOR: Arizona State Hospital

CONTACT:

Eli Schlossberg, R.Ph.
2500 E. Van Buren St.
Phoenix, AZ

Approved for 3 required hours toward the ArMA Certificate in Continuing Medical Education.

THIRD ANNUAL SURGICAL SYMPOSIUM

January 19, 24, 1975
Sheraton Scottsdale, Scottsdale, AZ

SPONSOR: Phoenix Surgical Society, Tucson
Surgical Society and U of A
College of Medicine

SPONSOR:

Phillip Saba, M.D.
4550 North 51st Ave.
Phoenix, AZ 85031

Approved for 28 required hours toward the ArMA Certificate in Continuing Medical Education.

EIGHTEENTH ANNUAL CARDIAC SYMPOSIUM

January 24, 25, 1975
Scottsdale Hilton Inn, Scottsdale, AZ

SPONSOR: American Heart Association,
Arizona Affiliate

CONTACT:

Brendan Phibbs, M.D.
1720 East McDowell Road
Phoenix, AZ 85006

Approved for 12 required hours toward the ArMA Certificate in Continuing Medical Education.

PERINATAL RISK: DETECTION, PREVENTION AND TREATMENT OF CONGENITAL DISORDERS

January 23, 24, 25, 1974
Ramada Inn, Phoenix, AZ

SPONSOR: Good Samaritan Hospital

CONTACT: Louise Warrick, R.N.
1033 E. McDowell Road
Phoenix, AZ 85006

Approved for 16½ required hours toward the ArMA Certificate in Continuing Medical Education.

PEDIATRIC ALLERGY

February 8 & 9, 1975
Tucson, AZ

SPONSOR: U of A, American Academy of Pediatrics, AAFP

CONTACT: Hugh Thompson, M.D.
U of A, Dept. of Pediatrics
Tucson, AZ 85724

Approved for 8 required hours toward the ArMA Certificate in Continuing Medical Education.

SECOND ANNUAL SYMPOSIUM BARROW NEUROLOGICAL INSTITUTE

January 23-25, 1974
Camelback Inn, Scottsdale, AZ

SPONSOR: The Barrow Neurological Institute
of St. Joseph's Hospital & Medical Center

CONTACT:
Richard A. Thompson, M.D.
Division of Neurology
Barrow Neurological Institute
St. Joseph's Hospital Medical Center
350 W. Thomas Road
Phoenix, AZ 85013

Approved for 15 required hours toward the ArMA Certificate in Continuing Medical Education.

ARIZONA STATE SOCIETY OF ANESTHESIOLOGISTS ANNUAL MEETING

March 11, 1975
Scottsdale Hilton, Scottsdale, AZ

SPONSOR: Arizona State Society of Anesthesiologists

CONTACT: Eldon S. Reed, M.D.
3625 N. 16th St.
Phoenix, AZ

Approved for 6 required hours toward the ArMA Certificate in Continuing Medical Education.

FRONTIERS IN OPHTHALMOLOGY

February 6, 7, 8, 1975
Scottsdale Hilton, Scottsdale, AZ

SPONSOR: Rockefeller & Abbie Prentice
Eye Institute of St. Luke's
Hospital Medical Center

CONTACT:
Louis Rosenbaum, M.D.
500 E. Thomas Road
Phoenix, AZ 85012

Approved for 18 required hours toward the ArMA Certificate in Continuing Medical Education.

SYMPOSIUM ON INFECTION CONTROL

March 20 & 21, 1975
Ramada Inn, Phoenix, AZ

SPONSOR: Assoc. for Infection Control,
Arizona Dept. of Health Services,
and Center for Disease Control
at Atlanta, Ga.

CONTACT:
Sonia J. Burns, R.N.
3923 S. Willow Drive
Tempe, AZ 85282

Approved for 12 required hours toward the ArMA Certificate in Continuing Medical Education.

SYMPOSIUM ON HEAD & NECK CANCER

February 8, 1975
Good Samaritan Hospital, Phoenix, AZ
Sexon Hall Auditorium

SPONSOR: American Cancer Society, Maricopa County
Unit & Division of Oncology, Good Samaritan Hospital

CONTACT: Gabriel deFreitas, M.D.
c/o American Cancer Society
Prof. Ed. Comm.
4700 N. 12th St.
Phoenix, AZ 85014

Approved for 5 required hours toward the ArMA Certificate in Continuing Medical Education.

ARTHRITIS SERVICES PROGRAM

April 5, 1975, 9 a.m.-4 p.m.
Arizona Medical Center, Tucson, AZ

SPONSOR: Arthritis Services Program,
U of A College of Medicine

CONTACT:
Beth Ziebell
3813 E. 2nd St.
Tucson, AZ

Approved for 6 required hours toward the ArMA Certificate in Continuing Medical Education.

**ARIZONA MEDICAL ASSOCIATION
84TH ANNUAL MEETING**

April 22-26, 1975
Braniff Place Hotel and Tucson Community Center
Tucson, AZ

SPONSOR: Arizona Medical Association and
Northwestern University

CONTACT:
Donald J. Ziehm, M.D.
Program Director
Arizona Medical Association
810 W. Bethany Home Rd.
Phoenix, AZ 85013

VECTORCARDIOGRAPHY — A BASIC WORKSHOP

April 30-May 2, 1975
Good Samaritan Hospital, Phoenix, AZ

SPONSOR: American College of Cardiology,
Institute for Cardiovascular
Diseases, Good Samaritan Hospital

CONTACT:
Alberto Benchimol, M.D.
Institute for Cardiovascular Diseases
1033 E. McDowell Rd.
Phoenix, AZ

**PHYSICIANS TRAINING PROGRAM AS
PART OF ARTHRITIS SERVICES PROGRAM**

July 1, 1974 - June 30, 1975
Arizona Medical Center, Tucson, AZ

SPONSOR: Arizona Medical Center and
Arthritis Services Program

CONTACT:
Beth Ziebell
3813 E. 2nd St.
Tucson, AZ

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GRAND ROUNDS MEDICAL & SURGICAL

Each Thursday 7 a.m.-8 a.m.
St. Mary's Hospital, Trek Room, Tucson, AZ

SPONSOR: Departments of Medicine, Family Practice,
and Surgery

CONTACT: Jack D. Nestor, M.D.
Clinical Laboratory
1601 W. St. Mary's Rd.
Tucson, AZ 85703

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**PHOENIX PSYCHIATRIC COUNCIL
CONTINUING EDUCATION PROGRAM**

September 1974 — May 1975

SPONSOR: Phoenix Psychiatric Council

CONTACT:
Robert H. Barnes, M.D.
525 N. 18th St.
Phoenix, AZ 85006

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BI-MONTHLY MEDICAL EDUCATION SEMINAR

Every other Wed. AM
Begin 7/3/74

Maryvale Samaritan Hospital, Phoenix, AZ

SPONSOR: Medical Staff Maryvale Hospital

CONTACT:
Thomas J. Groves, M.D.
6037 W. Elm St.
Phoenix, AZ 85033

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CAMELBACK HOSPITAL CLINICAL CONFERENCE

3rd Tuesday monthly
Camelback Hospital, Phoenix, AZ

SPONSOR: Camelback Hospital

CONTACT:
Stuart M. Gould, Jr., M.D.
Medical Director
Camelback Hospital
5055 N. 34th St.
Phoenix, AZ 85018

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Certificate in Continuing Medical Education.

PATIENT STAFFING CONFERENCE

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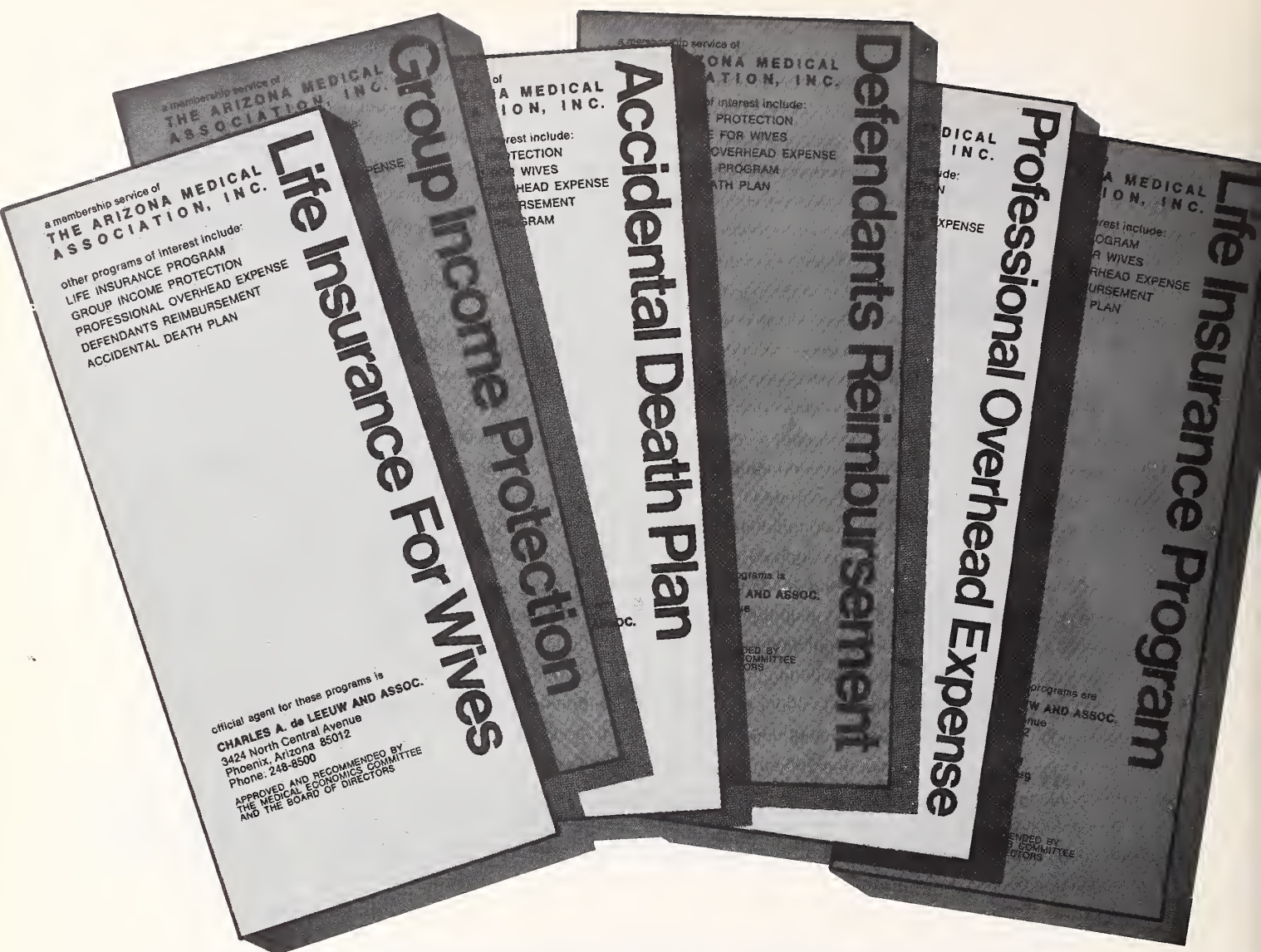
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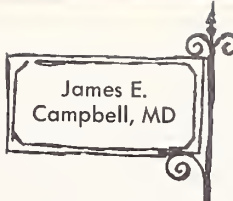


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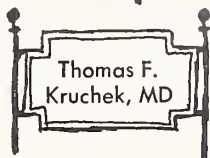


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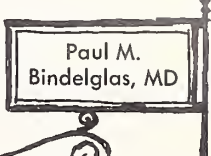


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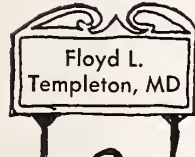
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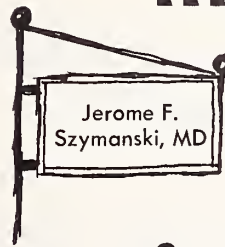
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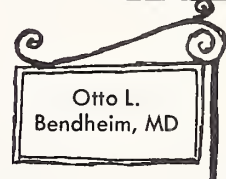


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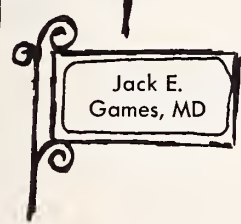


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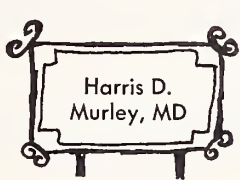
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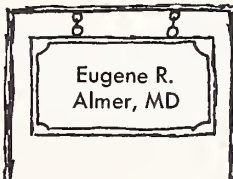
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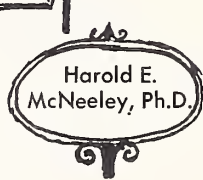
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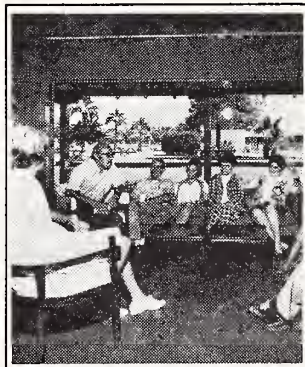
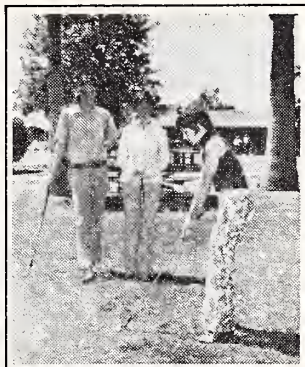
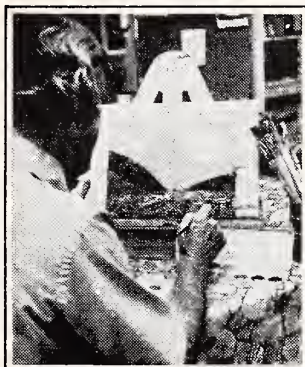
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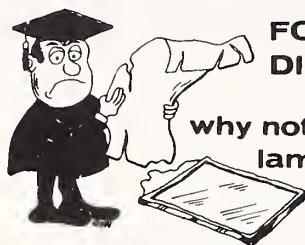


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